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THE STUDY OF MAN

Seymour M. Lipset
TRENDS IN AMERICAN SOCIOLOGY

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THE PERILS OF OBEDIENCE

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LANGUAGE AND HUMAN COMMUNICATION

Nathan Glazer ETHNICITY: A WORLD PHENOMENON

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Isaac Asimov
IS SCIENCE USEFUL?

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BOOK REVIEWS

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A NOTE TO THE READER

Pavid Thoreau, would be like a healthy body that functions perfectly without our being aware of it. But every society has its aches and pains, and complex modern societies tend to have the most intricate and baffling complaints of all. While men have always puzzled over themselves and their societies, it is only in the past century that they have tried to adapt the laboratory techniques of the physical sciences to the study of social behavior.

But any claims to being scientific have been muted and qualified, since social situations are never exactly replicable and human observers can never be completely free from subjective predispositions. The articles in this issue's special section represent a variety of informed explorations which fall short of the certitudes of the physical sciences, but nevertheless bring the objective, open-minded scientific temperament to bear on man's behavior in society.

Seymour Martin Lipset traces the development of the sociological profession in the United States, and notes its unique emphasis on the solution of social problems. Stanley Milgram describes one of the most politically significant experiments in the field of contemporary psychology, shedding light on the nature of obedience and authority. Nathan Glazer takes a phenomenon much studied in the United States—ethnic diversity and conflict—and finds that it has recently become an acute source of social unrest around the world.

These three articles are by outstanding academic behavioral scientists. But the study of man is not the exclusive province of sociologists, psychologists, or anthropologists. Some of the most penetrating insights into social behavior have come from poets, novelists, philosophers and physical scientists. Charles Frankel, who is a philosopher and a novelist, here examines the moral issues raised by recent spectacular advances in genetics and "biomedicine." Lewis Thomas, who is a physician and medical researcher, combines his laboratory knowledge with a poetic vision of the human species, which he finds uniquely and blessedly capable of ambiguous language. "Surely," we may conclude with Montaigne, "man is a wonderful, vain, diverse and wandering subject."

N.G.

The Study of Man

TRENDS IN AMERICAN SOCIOLOGY

By Seymour M. Lipset



The emphasis American sociologists have placed on solving social problems, writes the author, reflects the concerns of a fluid and very mixed society. Here Professor Lipset surveys the remarkable abundance of observation and analysis produced by members of one of the newest, yet one of the most influential, academic disciplines of the 20th century.

Seymour Martin Lipset is currently professor of political science and sociology and senior fellow of the Hoover Institution at Stanford University. He was formerly on the faculties of Harvard University and the University of California. He has earned an international reputation as a commentator on contemporary social issues through his lectures and writings. His books include Political Man, The First New Nation, and Rebellion in the Univer-

sity. He is also the co-author of two works published in 1975: Education and Politics at Harvard (with David Riesman) and The Divided Academy (with Everett C. Ladd, Jr.).

he study of social patterns as an academic subject has been established widely but unevenly throughout the world. Nearly every nation now has a society affiliated with the International Sociological Association, but some universities lack even a single chair in the subject. Before World War II, sociology was prominent in the Netherlands, South Africa, Poland, Belgium and the United States. While differing widely in other respects, these nations had one thing in common. All had severe conflicts between ethnic or religious groups, and sought to reduce these conflicts so that diverse cultural groups could join together, or at least live together peacefully if separately. The United States faced not only the problem, common to most nations, of creating a stable pattern of life in rapidly growing cities, but also the problem of assimilating great numbers of immigrants. The consequence for American sociology was a special emphasis on the investigation of problems of urban and ethnic life.



While European sociologists were primarily concerned with broad social and philosophical issues, including problems of historical change, American sociologists concentrated on the solution of specific social problems. This orientation to problem solving, and thus to policy making, may account for the rapid acceptance of American sociology by university administrators, government officials and heads of social work agencies, unions, churches, businesses and political parties.

Emphasis on Social Reform

Early American sociology (at the start of the 20th century) devoted itself to problems associated with immigrant slums in the large cities: family disorganization, juvenile delinquency, crime, and suicide. Encouraging this reformist tendency was the fact that the early practitioners of the new science were often ministers of the gospel with a deep moral concern, or scientists and engineers who attempted to apply "scientific method" to the solution of social evils. Another source of encouragement for a reform-oriented sociology in the universities was the parallel emergence of popular movements of political reform around the turn of the century.

This emphasis on social problems was reflected at Chicago and Columbia, the universities which at least until the 1930's had the two leading American departments of sociology and trained well over half of American sociologists. The sociology department of Chicago, the more important of the two, was noted for its extensive studies of metropolitan problems, reflected in a series of monographs such as The Gang, The Negro Family in the United States, The Etiquette of Race Relations in the South, The Marginal Man, The Hobo and The Unadjusted Girl. Perhaps the most influential single piece of research to come out of Chicago was W.I. Thomas and Florian Znaniecki's The Polish Peasant in Europe and America, the result of collaboration between American and Polish sociologists. This study has since served as a model for the

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The proper study of mankind is man.

Alexander Pope

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application of sophisticated theory to refined research methods. It analyzed the problems of a peasantry in the process of migrating to an urban culture and entering the industrial work force on both sides of the Atlantic. The findings, based on many detailed life histories, showed how a drastic change in social environment led to the breakup of the stable rural Polish family, to conflicts between the generations, and to a great increase in deviant behavior—that is, behavior violating

the traditions or expectations of the community.

At Columbia University, the heavy emphasis on social reform as a goal of sociological analysis was reflected in the work and perspective of Franklin Giddings, Columbia's first professor of sociology and its foremost sociologist until the late 1920's. His original training was in the physical sciences, and he believed with Herbert Spencer that social engineering should be based on a general social science, that of sociology. He argued that a truly scientific sociology "should enable us to diminish human misery and to live more wisely than the human race has hitherto." Giddings expected graduate students in sociology to take courses in criminology, penology, pauperism and poor laws, in addition to learning basic theory, historical sociology, and research methods. Courses in the family required students to investigate at first hand the life of underprivileged families. The monographs produced by Columbia graduate students reveal the prevailing emphasis on social problems. Their titles included: How Workingmen Spend Their Spare Time, Farmers and Workers in American Politics, The Negro Peasant Turns Cityward, The Divorce Problem, Crime in its Relation to Social Progress, and Jewish Immigration to the United States.

Broadening Concerns

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During the 1920's American sociology began to emerge as an academic field separate from the concerns of social workers and social reformers. While continuing their focus on the deviant and the underprivileged, sociologists began to apply more refined methods than before. There were new developments in theory. The "functional approach," for example, viewed specific institutions and problems as part of an interdependent whole, in contrast to the earlier American sociological approach, which tended to conceive the problems of society as inherent in specific institutions.

These changes are evident in the study of social stratification. Early American sociologists like Giddings of Columbia, William Sumner of Yale, and Charles Cooley of Michigan, had dealt with larger aspects of social structure such as power and class. But these subjects were treated in lectures and general articles rather than taken as foci for research. The *Middletown* studies of Robert and Helen Lynd were the first to treat these topics in the form of hypotheses to be tested in research, and were the first large-scale investigations to emphasize the new functional approach. With the aid of a research staff the Lynds examined institutions and public opinion in an industrial city in the midwest state of Indiana, and interpreted their findings in the light of certain hypotheses about the relation of social class position to behavior. Their work suggested that social ills can be adequately understood only in terms of the larger social structure.

Merging Theory and Research

While the Lynds were conducting their research into the class structure of a typical American community, a Russian-born-and-trained sociologist, Pitirim Sorokin, introduced American sociologists to the myriad of quantitative studies of social mobility produced in Europe, and in his classic volume, Social Mobility (1927), underlined the close relation of theory to research. In a second volume, Contemporary Sociological Theory, published a year later, he made many Americans aware of the importance of systematic theory, an intellectual pursuit with a long history in Europe but largely ignored by problem-oriented American sociologists.



Man is the only animal that laughs and weeps; for he is the only animal that is struck with the difference between what things are, and what they ought to be.

William Hazlitt

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The work of the Lynds and Sorokin in the latter 1920's thus played a major role in changing the outlook of American sociology, setting the stage for the investigation of relationships within the larger social structure. Changes in the concepts applied to various social strata by sociologists are an index of this influence. For example, early sociologists described the behavior of slum area residents as "delinquent," "depressed" and "deviant." By contrast, sociologists in the 1930's and thereafter came to analyze such problems in the context of class differences in values and behavior, that is, by indicating that what the middle-class regarded as "deviant" might be normal within the slum groups.

Talcott Parsons, a young man destined to play a major role in furthering the new trends, appeared on the American sociological scene in the 1930's. Through his teaching at Harvard University and his famous volume, The Structure of Social Action, Parsons impressed upon American scholars the importance of systematic theory. He also brought to their attention the work of major European sociologists.

Parsons is best known for his efforts to create an interdisciplinary theoretical framework for the analysis of social behavior. His conceptual approach includes not only the categories of the major sociologists but also the ideas of economists like Adam Smith, Karl Marx and John Maynard Keynes, and of psychologists like Sigmund Freud. Parsons argues that progress in the social sciences, as in the natural sciences, must result in more general kinds of theory which incorporate earlier, more limited efforts.

Although primarily a theorist, Parsons, like his older Harvard col-

league, Sorokin, insisted that theory and empirical research are necessarily interdependent. He illustrated this point by showing how the French sociologist Emile Durkheim employed suicide statistics to test hypotheses about group differences drawn from a general theory of society. He further bridged the gap between European and American sociology by his translation and analysis of Max Weber's classic historical study, The Protestant Ethic and the Spirit of Capitalism.

The Sources of Social Behavior

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But the most immediate impact of Weber's work on American sociology came not from this exploration of the "work ethic," but from the German scholar's ideas about bureaucratization as the dominant trend within the major institutions of all advanced industrialized societies. A number of U.S. sociologists, including Robert Merton, Peter Blau, James March, Reinhard Bendix, Alvin Gouldner, and C.W. Mills, amplified various of Weber's concepts in their own writings. They showed how the hardening of the bureaucratic hierarchy in a complex, large organization-such as a government department, a political party, a large industrial plant, or a university—results in the modification of its original idealistic objectives. Thus, when setting organization policy, the leaders of unions or of reformist or revolutionary political parties often react in terms of their self-interest as a privileged group, although such interests may conflict with those of their followers. Some of the research stemming from Weber has emphasized the extent to which bureaucratization inherent in large-scale organizations frees officials from control by those who nominally should decide ultimate policy—the members of a union or political party, the shareholders of a corporation, the faculty of a university.

In the late 1920's and early 30's, Paul Lazarsfeld and a number of other young Austrian scholars, all of whom were active Socialists, began an extensive series of investigations in Vienna to illuminate the sources of social behavior. They sought to provide the scientific base for political action, to test the theoretical assumptions underlying the practice of left-wing politicians and office-holders. Lazarsfeld and his colleagues also used the interview method to study the sources of occupational choice, the influence of advertising and mass media on consumer decisions, and the effects of unemployment and insecurity on family interaction and political attitudes.

Upon his arrival in the United States in the 1930's, Lazarsfeld successfully interested several American social scientists in the need for a more self-conscious concern with research methodology. At Columbia University, he established a university-affiliated social research institute, the Bureau of Applied Social Research. This institute, primarily devoted to studies using the public opinion survey and other quantitative methods and closely linked with the sociology department, has

since been adopted as a model by most major universities, e.g., the Survey Research Centers of the Universities of California and Michigan and the National Opinion Research Center at the University of Chicago.

The trends set in motion by Sorokin, Lynd, Parsons and Lazarsfeld culminated in a sociology consciously oriented toward building a science of society. Most important sociological work today is designed to contribute to sociological theory, by testing propositions derived from theory and modified in the light of new empirical findings. As in other scientific fields, older assumptions must be rejected when new evidence contradicts them. The concern for a scientific sociology is reflected in technical courses in theory and methods which are now required in the leading centers of graduate training.

The Study of Attitudes

In the past two decades, American sociologists have examined almost every activity and institution in the country. Much work has been done in the sociology of culture, which looks at the social determinants of creativity on the one hand, and at the public reception of cultural products on the other. Students of the mass media have tried to discover the composition of audiences for radio, newspapers, and television, and the reasons for their variable preferences.

The sociology of work has investigated the culture and organization of the factory, in some instances by sociologists who spent long periods as factory workers studying their fellow workers' behavior. Other studies have involved long, detailed interviews with selected industrial workers. Job satisfaction has been investigated thoroughly. The trade union has also been studied, to answer such questions as: who joins unions and who does not, who attends union meetings, what is the effect of union membership on the class and political attitudes of its members, who becomes a union leader, and how do attitudes and values of leaders and members differ.

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Humankind cannot bear very much reality.

T.S. Eliot

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Racial, ethnic and religious prejudice, phenomena found in most countries, have been studied in detail in various parts of the United States. Considerable research has been done on the effect of education on racial attitudes, the consequences of different races living together in the same neighborhood or school, and differences in family background, class position and personality between prejudiced and unprejudiced individuals.

A major body of work on problems of the family and population includes studies of the factors associated with stable or happy family life, the effects of variation in number of children in a family on the child's personality and ability to learn, and the elements which affect the size of family.

Political behavior and attitudes have also been analyzed in depth. There are many investigations, both historical and contemporary, of the factors associated with support for political parties. The same is true for political attitudes. Survey studies have been able to specify the variables, such as social class or education, which correlate with economic radicalism or conservatism, with internationalism versus isolationism, with support for civil liberties for unpopular minorities, and with concern for legal protection of the individual.

Study of Class Relations

Social class has been one of the most studied fields in American sociology. The term class, of course, has been used in varying senses, but in general it refers to differences between those who are "higher or lower." More concretely, it distinguishes differences of income; of socio-economic status, that is, the prestige that individuals receive as a result of a combination of their income and occupational status; or of power position, which determines, whether they expect obedience from, or give obedience to, others as a result of their position in a structure.

American sociologists thus use the word class in a different and much broader sense than do Marxists. In their view, class differences are present under all forms of property relationships, since class factors differentiate family behavior, school success, attitudes toward minority groups, support of political parties, birth rates, participation in different types of leisure activities, and exposure to various forms of the mass media and cultural activity. Using this approach, American sociological studies have shed light on the social determinants of human behavior.

Social Mobility

Take, for example, the investigations of social mobility, or movement up and down the hierarchy of social classes, which has been of special interest to American scholars. The many studies of this topic agree that about 30 percent of Americans from non-farm background have crossed the line between manual working class and the non-manual "middle-class," moving up or down from their father's class position. (Two-thirds of these have moved up, and one-third down.) However, if mobility is considered as movement between occupational strata—e.g., from unskilled to skilled, lower-white-collar to professional—we find that 67 percent of the population have been socially mobile. And

studies in American cities of social mobility from the 19th century to recent periods, based on documentary records, have concluded that the rate of social mobility has remained steady over a 90-year time span.

More detailed and sophisticated studies of social mobility have been completed during the 1960's and 1970's by Peter Blau of Columbia and Otis Dudley Duncan of the University of Arizona, Robert Hauser of the University of Wisconsin and Christopher Jencks of Harvard. Much to the surprise of many inside and outside of the professions, these surveys suggest that, the black population apart, the United States has approached the optimum definition of an open society, i.e., one in which differences in family economic background have relatively little effect in predicting achievement. According to Jencks, a man's income is likely to be as different from his brother's as from the income of totally unrelated individuals of similar ages. Blau, Duncan and Hauser also reported that lowly social origin did not significantly decrease the chances of whites to advance economically.

But if working-class whites have experienced a fluid occupational class system, in which the able and ambitious can rise, this has not been equally true for blacks. Blau and Duncan's data from the early 1960's indicated "that Negroes are handicapped at every step in their attempts to achieve economic success, and these cumulative disadvantages are what produced the great inequalities of opportunities under which the Negro American suffers." Education, which opens all sorts of doors for whites, even when of low social origin, does not work as well for blacks. Still, it should be noted that-following the civil rights legislation of the mid-1960's—blacks have made impressive gains over the past decade with respect to level of education (the median school level attained by young blacks has come close to parity with whites). And before the recession of the mid-1970's, the gap in earnings between whites and blacks of a comparable education level had begun to narrow year by year: the 1970 census figures showed that the incomes of married black university graduates equalled those of similarly situated whites.

More Room at the Top

Changes in the organization of business, industry and government have played an important role in determining who rises to top management positions. Increased bureaucratization has put a premium on educational attainment as a criterion for appointment to high positions. This type of choice benefits most those from more educated and wealthier families which can provide greater cultural advantages. The higher echelons of American business and government are thus disproportionately recruited from the more privileged strata of society. This upper layer, however, is much larger in numbers and much more open to new recruits than it was even 20 years ago.

The growth of bureaucracy and the large corporation also means that men can no longer inherit positions at the top—the president of General Motors or Standard Oil can no more pass on his position to his son than can a high government official. They can provide their offspring with a better beginning on the road to success, but they cannot assure the outcome. In addition, increasing numbers from all levels of society are obtaining higher education—currently close to half of the relevant age group enter universities or colleges. This fact explains the findings of a number of recent studies that the proportion of highlevel business executives from low-status backgrounds is currently higher than ever. Thus, a study of the social origins of officers of leading corporations found in 1964 that "only 10.5 percent of the current generation of big business executives are sons of wealthy families; as recently as 1950 the corresponding figure was 36.1 percent, and at the turn of the century, 45.6 percent." The evidence indicates that the post-World War II period brought the greatest increase in the proportion of those from economically "poor" backgrounds (from 12.1 percent in 1950 to 23.3 percent in 1964) to enter the top echelons of American business; and there was a correspondingly great decline in the percentage from wealthy families (from 36.1 percent in 1950 to 10.5 percent in 1964).

Class and Political Attitudes

Some European political commentators have expressed the belief that political party conflict in the United States differs from that of Europe in not being related to class differences. This view has been challenged by research in which samples of the electorate were interviewed and by studies which correlated the social composition of electoral districts with their voting record. A very large number of surveys agree that the Democratic Party has been based on lower status occupational, religious and ethnic groups, and that Republicans have been much more commonly found among those with higher status characteristics. These differences in the social base of the two parties are not simply recent developments flowing from controversies over the welfare state or the rise of the trade union movement. Recent studies of 19th century presidential elections find that the Democrats have always received proportionately more votes from the poorer and immigrant groups. The conservative 19th century counterparts of the contemporary Republican party had greater strength among the more well-to-do and the native-born Anglo-Saxon Protestants.

Sociological surveys reveal the important effects of class position on social and political opinions. The lower strata are much more likely than the higher to support trade unions, welfare state measures, government economic planning, socialized medicine, and the progressive income tax. On non-economic issues, however, the lower strata are

usually less liberal than the more well-to-do. They are more likely to oppose civil liberties for unpopular political minorities, civil rights for Negroes, liberal immigration policies, internationalism in foreign policy, and to favor severe punishment for criminals. This greater intolerance and cultural conservatism among the poorer strata, several studies indicate, is due largely to their being less educated and more economically insecure, therefore also more suspicious of differences and innovation, and more worried about competition from strangers, whether they be native-born Americans of different racial and ethnic origin or foreigners. Such insecurities have been reflected in recent years in the disproportionate support from less privileged whites given to Alabama Governor George Wallace's peculiar form of nationalist and (increasingly less overt) racist populism, which blames the threat to their position and values on the innovative reform thrust coming from a segment of the highly educated well-to-do.

The Intellectual Elite

There is some evidence that Wallace and his supporters are reacting to a real change in American society characterized by the increasing influence of an emerging political intelligentsia, associated with the universities, the media, research and development activities, and welfare-related occupations. This group, which has been also dubbed by economist John Kenneth Galbraith "the educational and scientific estate," though well-to-do and of high status, has adopted a generally critical, anti-Establishment world view. Thus, studies of professors, non-academic intellectuals, and media leaders confirm Daniel Bell's generalization that the "new class, which dominates the media and the culture.... is profouncly anti-bourgeois."

The preference of this intellectual elite for socially critical and counter-cultural values appears to parallel trends in social outlook and political activism among university students. In Rebellion in the University, I have summarized a large number of surveys which have demonstrated that anti-system politics and counter-cultural lifestyles have appealed disproportionately to the more affluent students (particularly those studying the social sciences or the humanities) in the more academically selective high-prestige institutions, as distinct from less well-to-do students in the more vocationally oriented schools and subjects.

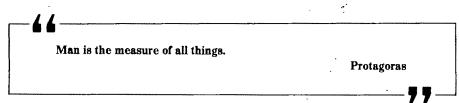
There is some evidence also to suggest that the values stemming from the intellectual and university community, transmitted through the elite media, are affecting the orientations of many employed in high levels of government and industry. These professionals, as public opinion analyst Louis Harris reports in *The Anguish of Change*, feel "much more beholden to their outside discipline... than to the particular company or institution they work for," and are the occupational group

"most dedicated to changing the system."

A number of social scientists have suggested that in contemporary "post-industrial" or advanced industrial society, intellectual and scientific developments centered in and around the university have become the principal element in social change. Many leading sociologists have turned to analyzing this institution over the past decade, in recognition of its increased significance. Among the more widely discussed books in this field are The Academic Revolution by Christopher Jencks and David Riesman; The American University by Talcott Parsons and Gerald Platt; The Degradation of the Academic Dogma by Robert Nisbet; and The Divided Academy: Professors and Politics by Everett Ladd and S.M. Lipset. Intellectuals generally have been of increasing interest to American sociologists, as reflected particularly in works by Lewis Coser, Edward Shils, and Charles Kadushin. Daniel Bell's major work, The Coming of Post-Industrial Society, is the most ambitious effort to account for the increasing importance of academic and intellectual activities as a reflection of basic structural changes.

The Search for General Laws

The findings briefly surveyed here provide a small sample of the extensive knowledge gathered by sociologists, knowledge which is both wide in coverage and deep in its probing of American society. While American sociologists have provided a wealth of descriptive data about their society and its behavior, it should be emphasized that sociology seeks to understand how social structures operate primarily in order to formulate general laws of social behavior, much as the biological sciences seek general laws from the description and analysis of physiological structures and processes.



An example of the effort to relate theory and experiment is the cooperative research of Talcott Parsons and his Harvard colleague, Robert Bales, the latter a student of small groups, such as the family or job colleagues. From his work in general sociological theory, Parsons postulated that groups require both "instrumental" and "expressive" leadership. The first type is directed toward achieving practical group tasks; the second provides for emotional support and integration of the group rather than specific accomplishments. Since these types of leadership require different social skills, Parsons hypothesized that each type is best performed by a different person. He cited the family,

in which the father is usually the instrumental leader and the mother the expressive leader. He suggested that the differences in behavior of the two parents is not inherent in biological differences between the sexes; rather it reflects the advantages of a division of labor between the two types of leadership essential to the functioning of all groups.

Bales provided support for Parsons' hypothesis in experimental studies of single-sexed groups of five to seven members, who were carefully observed through a one-way viewing wall which permitted the sociologists to watch the groups without being seen. In each of the groups—whether all men or all women—two leaders developed within the group, one who guided it toward the completion of tasks set by the experimenter, and another who provided leadership in solving emotional problems. By confirming that women share with men the capacity for both types of leadership, these findings support the effort of the women's movement to eliminate traditional assignments of roles on the basis of sex.

Contrasting strikingly with this type of small group research, yet similarly concerned with the development of general theory, is the area of comparative national research. An effort has been made in recent years to test in other societies propositions derived from research in America. Thus American sociologists have investigated the processes of social change in Asia, Africa, Latin America and Europe. They have found that similar social dynamics are at work, despite differences in political and cultural institutions. A recent study by Alex Inkeles of Stanford University sought to locate the factors most associated with "modern" attitudes that encourage rapid economic development. In Becoming Modern Inkeles reported that in six nations, Chile, India, Israel, Nigeria, Pakistan and the United States, education proved to be the most important factor, much more significant than occupational status or rural-urban residence.

Impact on Social Problems

The preoccupation of American sociology with theory and scientific method does not mean that it has abandoned the hopes of its founders that it would contribute to the solution of various social problems. In the past decade, many sociologists have been engaged in research on the major social problems of the day, and have published important works bearing on these subjects. Thus, as noted earlier, the study of the effects of discrimination against ethnic and racial minorities and women has been of increasing concern to a large segment of the profession for many decades. It has been a matter of some pride among U.S. sociologists that the Supreme Court decision of 1954 declaring racial segregation in public schools unconstitutional was based in part on professional sociological and psychological studies of the effects of segregation on black children. The most influential study of the effects

of educational integration efforts is the now famous "report" on Equality of Educational Opportunity by James S. Coleman of the University of Chicago. The burgeoning sociological literature on the position of the woman includes Cynthia Epstein's Woman's Place, Helen Lopata's Occupation: Housewife, and Marijean Svelzle's The Female Sex Role.

Medical sociology—the study of social factors such as class, ethnic or religious background, as they relate to health and illness—is now one of the largest sub-fields within the profession. In addition, the study of juvenile delinquency, crime, alcoholism, family stability and instability, population trends, all engage the research attention of many American sociologists. In each of these fields, sociologists hope that their theoretical work will help them understand the causes of behavior which society would like to affect; and conversely, that their research on these social problems will help clarify the larger generalizations of the discipline. In this way, sociology emulates the procedure in the biological and medical sciences.

Debate among Sociologists

As a final comment, it should be noted that sociology has been under severe criticism from within since the revival of left-wing political activism in the late 1960's. A group of radical scholars has contended that the dominant theoretical approaches in the profession imply a conservative pro-status quo position. They argue also that the reliance by leading scholars on research grants from government and private foundations has inevitably pressed many of them to do "safe" work. This position has been answered by those who point to a variety of empirical data indicating that sociologists as a group are more sympathetic to socially critical views than members of any other academic discipline. As sharp a leftist critic of the sociological "establishment" as Alvin Gouldner has stressed that in all fairness it should be recognized that it was the academic sociologists, not the Marxists, in the United States who helped many to get their first concrete picture of how blacks live, and who contributed to such practical political developments as the Supreme Court's desegregation decision.

The politically related controversies of the past decade have not slowed down the efforts of American sociologists to find explanations of why individuals, groups and society in general behave as they do, although the models and methods employed have become more sharply divergent than ever. These varied approaches of social behavior sometimes lead to results which contradict each other and challenge the validity of past work. But awareness of the limitations of our knowledge in sociological matters can be useful, by instilling a greater sense of humility in our judgment of human behavior, and by restraining us from assertions which do not have the backing of adequate evidence.

THE PERILS OF OBEDIENCE

By Stanley Milgram

How far will individuals go along with authority when that authority commands them to act in a way that goes against their conscience? To find the answer, Professor Milgram conducted a series of experiments over many years and in many countries, in situations where the subjects were neither threatened with punishment nor offered rewards. His findings are widely considered among the most provocative and socially significant in contemporary psychology. They are also, along with his experimental method, highly controversial.

Stanley Milgram is professor of psychology at the Graduate Center of the City University of New York. He formerly taught at Yale University, where his experiments were initiated. His article offers a summary of material which is more fully elaborated in his book Obedience to Authority, published by Harper & Row.



bedience is as basic an element in the structure of social life as one can point to. Some system of authority is a requirement of all communal living, and it is only the person dwelling in isolation who is not forced to respond, with defiance or submission, to the commands of others. For many people, obedience is a deeply ingrained behavior tendency, indeed, a potent impulse overriding training in ethics, sympathy, and moral conduct.

The dilemma inherent in submission to authority is ancient, as old as the Biblical story of Abraham, who is commanded by God to sacrifice his son as a test of his faith. And the question of whether one should obey when commands conflict with conscience has been argued by Plato, dramatized in Sophocles' Antigone, and treated to philosophic analysis in almost every historical epoch. Conservative philosophers argue that the very fabric of society is threatened by disobedience, while humanists stress the primacy of the individual conscience.

The legal and philosophic aspects of obedience are of enormous import, but they say very little about how most people behave in concrete situations. I set up a simple experiment at Yale University to test how much pain an ordinary citizen would inflict on another person simply because he was ordered to do so by an experimental scientist. Stark authority was pitted against the subjects' strongest moral imperatives against hurting others. With the subjects' ears ringing with the

screams of the victims, authority won more often than not. The extreme willingness of adults to go to almost any lengths on the command of an authority constitutes the chief finding of the study and the fact most urgently demanding explanation.

In the basic experimental design, two people come to a psychology laboratory to take part in a study of memory and learning. One of them is designated as a "teacher" and the other a "learner." The experimenter explains that the study is concerned with the effects of punishment on learning. The learner is conducted into a room, seated in a kind of miniature electric chair; his arms are strapped to prevent

Man is by nature a political animal.

Aristotle

excessive movement, and an electrode is attached to his wrist. He is told that he will be read lists of simple word pairs, and that he will then be tested on his ability to remember the second word of a pair when he hears the first one again. Whenever he makes an error, he will receive electric shocks of increasing intensity.

The real focus of the experiment, however, is the teacher. After watching the learner being strapped into place, he is seated before an impressive "shock generator." The instrument panel consists of thirty lever switches set in a horizontal line. Each switch is clearly labeled with a voltage designation ranging from 15 to 450 volts, with verbal descriptions ranging from Slight Shock to Moderate Shock, Strong Shock, Very Strong Shock, Intense Shock, Extreme Intensity Shock, and finally Danger: Severe Shock.

Each subject is given a sample 45-volt shock from the generator before his run as teacher, and the jolt strengthens his belief in the authenticity of the machine.

Conscience at Work

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The teacher is a genuinely naive subject, who has come to the laboratory for the experiment in response to an advertisement placed in a local newspaper asking for volunteers for a scientific study of memory. The learner, or victim, is actually an actor who receives no shock at all. The point of the experiment is to see how far a person will proceed in a concrete and measurable situation in which he is ordered to inflict increasing pain on a protesting victim.

Conflict arises when the man receiving the shock begins to show that he is experiencing discomfort. At 75 volts, he grunts; at 120 volts, he complains loudly; at 150 volts, he demands to be released from the ex-

periment. As the voltage increases, his protests become more vehement and emotional. At 285 volts, his response can be described only as an agonized scream. Soon thereafter, he makes no sound at all.

For the teacher, the situation quickly becomes one of gripping tension. It is not a game for him; conflict is intense and obvious. The manifest suffering of the learner presses him to quit; but each time he hesitates to administer a shock, the experimenter orders him to continue. To extricate himself from this plight, the subject must make a clear break with authority.

A number of subjects, but a minority, did make this break and refused to go on with the experiment, as indicated by the following exchange:

Learner: Get me out of here. I told you I had heart trouble. My heart's beginning to bother me now. Get me out of here, please.

Teacher: I think we ought to find out what's wrong in there first.

Experimenter (wearing a technician's coat): As I said before, although the shocks may be painful, they are not dangerous.

Teacher: Look, I don't know anything about electricity. But I won't go any further until I find out if the man is OK.

Experimenter: It's absolutely essential that you continue. You have no other choice.

Teacher: Oh, I have a lot of choices. My number one choice is that I would not go on if I felt he was being harmed.

This man really fulfills our expectations of how people will perform in this situation. He makes disobedience seem a very rational and simple deed. But most of the other subjects responded quite differently to authority. A typical response was: "That man has a heart condition. Do you still want me to go on?" And when the experimenter replied: "Just continue, please," the teacher continued to obey while also continuing to object. The subject is saying one thing, but his behavior is quite different.

An Unexpected Outcome

Before the experiments, I sought predictions about the outcome from various kinds of people—psychiatrists, university students and professors, and ordinary workers. With remarkable similarity, they predicted that virtually all subjects would refuse to obey the experimenter. The psychiatrists, specifically, predicted that most subjects would not go beyond 150 volts, when the victim makes his first explicit demand to be freed. They expected that only 4 percent would reach 300 volts, and that only a pathological fringe of about one in a thousand would administer the highest shock on the board.

These predictions were unequivocally wrong. Of the 40 subjects in the first experiment, 25 obeyed the orders of the experimenter to the end, punishing the victim until they reached the most potent shock

available on the generator. After 450 volts were administered three times, the experimenter called a halt to the session. Many obedient subjects then heaved sighs of relief, mopped their brows, rubbed their fingers over their eyes, or nervously fumbled for cigarettes. Others displayed only minimal signs of tension from beginning to end.

When the very first experiments were carried out, Yale University undergraduates were used as subjects, and about 60 percent of them were fully obedient. A colleague of mine immediately dismissed these findings as having no relevance to "ordinary" people, asserting that Yale undergraduates are exceptionally aggressive and competitive. He assured me that when "ordinary" people were tested, the results would be quite different. As we moved from the pilot studies to the regular experimental series, people drawn from every stratum of nearby city life came to be employed in the experiment: professionals, white-collar workers, unemployed persons, and industrial workers. The experimental outcome was the same as we had observed among the students.

Moreover, when the experiments were repeated in Germany, Italy, South Africa, and Australia, the level of obedience was invariably somewhat *higher* than found in the investigation reported in this article. The experimenter in Munich found 85 percent of his subjects obedient.

The Role of Aggressive Impulse

One theoretical interpretation of this behavior holds that all people harbor deeply aggressive instincts continually pressing for expression, and that the experiment provides institutional justification for the release of these impulses. According to this view, if a person is placed in a situation in which he has complete power over another individual, whom he may punish as much as he likes, all that is sadistic and bestial in man comes to the fore. The impulse to shock the victim is seen to flow from the potent aggressive tendencies, which are part of the motivational life of the individual, and the experiment, because it provides social legitimacy, simply opens the door to their expression.

It becomes vital, therefore, to compare the subject's performance when he is *under orders* with what it is when he is allowed to *choose* the shock level.

The procedure was identical to our standard experiment, except that the teacher was told that he was free to select any shock level on any of the trials. (The experimenter took pains to point out that the teacher could use the highest levels on the generator, the lowest, any in between, or any combination of levels.) Each subject proceeded for 30 critical trials. The learner's protests were coordinated to standard shock levels, his first grunt coming at 75 volts, his first vehement protest at 150 volts.

The average shock used during the 30 critical trials was less than 60 volts—lower than the point at which the victim showed the first

signs of discomfort. Three of the 40 subjects did not go beyond the very lowest level on the board, 28 went no higher than 75 volts, and 38 did not go beyond the first loud protest at 150 volts. Two subjects provided the exception, administering up to 325 and 450 volts, but the overall result was that the great majority of people delivered very low, usually painless shocks when the choice was explicitly up to them.

This condition of the experiment undermines another commonly offered explanation of the subjects' behavior—that those who shocked the victim at the most severe levels came only from the sadistic fringe of society. If one considers that almost two-thirds of the participants fall into the category of "obedient" subjects, and that they represented ordinary people drawn from working, managerial, and professional classes, the argument becomes very shaky. Indeed, it is highly reminiscent of the issue that arose in connection with Hannah Arendt's 1963 book, Eichmann in Jerusalem. Arendt contended that the prosecution's effort to depict Adolf Eichmann (who administered the Nazi program of deporting Jews and others to the extermination camps) as a sadistic monster was fundamentally wrong, that he came closer to being an uninspired bureaucrat who simply sat at his desk and did his job. For asserting her views, Arendt became the object of considerable scorn, even calumny. Somehow, it was felt that the monstrous deeds carried out by Eichmann required a brutal, twisted personality, evil incarnate. After witnessing hundreds of ordinary persons submit to the authority in our own experiments, I must conclude that Arendt's conception of the banality of evil comes closer to the truth than one might dare imagine. The ordinary person who shocked the victim did so out of a sense of obligation—an impression of his duties as a subject and not from any peculiarly aggressive tendencies.

This is, perhaps, the most fundamental lesson of our study: ordinary people, simply doing their jobs, and without any particular hostility on their part, can become agents in a terrible destructive process. Moreover, even when the destructive effects of their work become patently clear, and they are asked to carry out actions incompatible with fundamental standards of morality, relatively few people have the internal resources needed to resist authority.

The Etiquette of Submission

Many of the people were in some sense against what they did to the learner, and many protested even while they obeyed. Some were totally convinced of the wrongness of their actions but could not bring themselves to make an open break with authority. They often derived satisfaction from their thoughts and felt that—within themselves, at least—they had been on the side of the angels. They tried to reduce strain by obeying the experimenter but "only slightly," encouraging the learner, touching the generator switches gingerly.

When interviewed, such a subject would stress that he had "asserted my humanity" by administering the briefest shock possible. Handling the conflict in this manner was easier than defiance.

The situation is constructed so that there is no way the subject can stop shocking the learner without violating the experimenter's definition of his own competence. The subject fears that he will appear arrogant and rude if he breaks off. Although these inhibiting emotions appear small in scope alongside the violence being done to the learner, they suffuse the mind and feelings of the subject, who is miserable at the prospect of having to repudiate the authority to his face. (When the experiment was altered so that the experimenter gave his instructions by telephone instead of in person, only a third as many people were fully obedient through 450 volts.) It is a curious thing that a kind of "compassion" on the part of the subject—an unwillingness to "hurt" the experimenter's feelings—is part of those binding forces inhibiting his disobedience. The withdrawal of such deference may be as painful to the subject as to the authority he defies.

Responsibility for One's Actions

The essence of obedience is that a person comes to view himself as the instrument for carrying out another person's wishes, and he therefore no longer regards himself as responsible for his actions. Once this critical shift of viewpoint has occurred, all of the essential features of obedience follow. The most far-reaching consequence is that the person feels responsible to the authority directing him, but feels no responsibility for the content of the actions that the authority prescribes. Morality does not disappear—it acquires a radically different focus: the subordinate person feels shame or pride depending on how adequately he has performed the actions called for by authority.

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Each man has a wild beast within him.

Frederick the Great

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Language provides numerous terms to pinpoint this type of morality: loyalty, duty, discipline all are terms heavily saturated with moral meaning, and refer to the degree to which a person fulfills his obligations to authority. They refer not to the "goodness" of the person but to the adequacy with which a subordinate fulfills his socially defined role. The most frequent defense of the individual who has performed a heinous act under command of authority is that he has simply done his duty. In asserting this defense, the individual is not introducing an alibi concocted for the moment, but is reporting honestly on the psychological attitude induced by submission to authority.

For a person to feel responsible for his actions, he must sense that the behavior has flowed from "the self." In the situation we have studied, subjects have precisely the opposite view of their actions—namely, they see them as originating in the motives of some other person. Subjects in the experiment frequently said, "If it were up to me. I would not have administered shocks to the learner."

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Man is the only animal that blushes. Or needs to.

Mark Twain



Even if the conflict between conscience and duty gives rise to strain, there are psychological mechanisms that come into play that help to alleviate this strain. For example, some subjects comply only minimally: they touch the switch of the generator very lightly. And they have the feeling that this really shows that they are good people, while, in fact, they are obeying. Sometimes they would argue with the experimenter, but argumentation does not necessarily lead to disobedience. Rather, it often serves as a psychological mechanism, defining the subject in his own eyes as a person who is opposed to the experimenter's callous orders, yet at the same time reducing tension and allowing the person to obey. Often we could see the person getting involved in the minute details of the experimental procedure. Becoming engrossed, he would lose all sight of the broader consequences of his action.

Variations of Authority

Once authority has been isolated as the cause of the subject's behavior, it is legitimate to inquire into the necessary elements of authority and how it must be perceived in order to gain his compliance. We conducted some investigations into the kinds of changes that would cause the experimenter to lose his power and to be disobeyed by the subject. Some of the variations revealed that:

- The experimenter's physical presence has a marked impact on his authority. As cited earlier, obedience dropped off sharply when orders were given by telephone. The experimenter could often induce a disobedient subject to go on by returning to the laboratory.
- Conflicting authority paralyzes action. When two experimenters of equal status, both seated at the command desk, gave incompatible orders, no shocks were delivered past the point of their disagreement.
- The rebellious action of others severely undermines authority. In one variation, three teachers (two actors and a real subject) administered a test and shocks. When the two actors disobeyed the experimenter and refused to go beyond a certain shock level, 36 of 40 subjects joined their disobedient peers and refused as well.

It is important to note that in our project the experimenter's authority was fragile, since he had almost none of the retaliatory powers available in ordinary command situations. For example, the experimenter did not threaten the subjects with punishment—such as loss of income, community ostracism, or jail—for failure to obey. Neither could he offer incentives. Indeed, we should expect the experimenter's authority to be much less than that of someone like a general or an employer or even a teacher, who has power to enforce his commands. Despite these limitations, he still managed to obtain a dismaying degree of obedience.

I will cite one final variation that depicts a dilemma common in everyday life. In this experiment, the subject was not ordered to pull the lever that shocked the victim, but merely to perform a subsidiary task (administering the word-pair test) while another person actually administered the shock. In this situation, 37 of 40 adults (approximately 90 percent) continued administering the test questions to the highest level on the shock generator. Predictably, they excused their behavior by saying that the responsibility belonged to the man

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Man is a pliable animal, a being who gets accustomed to everything.

F.M. Dostoyevski

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who actually pulled the switch. This may illustrate a dangerously typical arrangement in a complex society: it is easy to ignore responsibility when one is only an intermediate link in a chain of action.

The problem of obedience is not wholly psychological. The form and shape of society and the way it is developing have much to do with it. Every society, of course, has to inculcate habits of obedience in its citizens, since we cannot have society without some structure of authority. We learn obedience in the family situation and at school, but most of all when we move into the work world. Working in an office, a factory, or an army, one must necessarily give up a degree of individual judgment if these larger systems are to operate efficiently. In such work situations, one does not see oneself as responsible for one's own actions, but rather as an agent executing the wishes of another person.

There was a time, perhaps, when people were able to give a fully human response to any situation because they were fully absorbed in it as human beings. But as soon as there was a division of labor, things changed. Beyond a certain point, the breaking up of society into people carrying out narrow and very special jobs reduces the human quality of work and life. A person does not get to see the whole situation but only a small part of it, and is thus unable to act without some kind of overall direction. He yields to authority, but in doing so is alienated from his own actions.

Even Eichmann was sickened when he toured the extermination camps, but most of the time he had only to sit at a desk and write orders. The man in the camp who actually dropped Cyclon-b into the gas chambers was able to justify his behavior on the ground that he was only following orders from above. Thus there is a fragmentation of the total human act; no one is confronted with the consequences of his decision to carry out the evil act. The person who assumes responsibility has evaporated. Perhaps this is the most common characteristic of socially organized evil in modern society.

But the implications of our study apply equally in less extreme situations. Thus the conflict between conscience and authority is revealed to be only to a limited degree a philosophical or moral issue. Many of the subjects in the experiment felt, at least at the philosophical level of values, that they ought not to go on, but they were unable to translate this conviction into action. It does not take an evil person to serve an evil system. Ordinary people are easily integrated into malevolent systems.

Is there any way we can avoid this frightening potential, this easy acceptance of authority even when it is misguided or evil? It may be that we are puppets—puppets controlled by the strings of society. But at least we are puppets with perception, with awareness. And perhaps our awareness is the first step toward our liberation. The fact that obedience is often a necessity in human society does not diminish our responsibility as citizens. Rather, it confers on us a special obligation to place in positions of authority those most likely to use it humanely. And people are inventive. The variety of political forms we have seen in history are only several of many possible political arrangements. Perhaps the next step is to invent and to explore political forms that will give conscience a better chance to resist errant authority.

TWO COMMENTS

Professor Milgram's experiments have aroused considerable controversy, particularly about the ethical justification for deceiving his subjects, but also with respect to the larger implications of his findings. The following divergent comments suggest the range of responses by fellow psychologists. Professor Lawrence Kohlberg, who heads the Center for Moral Education at Harvard University's Graduate School of Education, is well known for his studies of the development of moral perception from adolescence to early adulthood. Richard J. Herrnstein is professor of psychology at Harvard University and author, most recently, of a controversial study of intelligence testing, I.Q. in the Meritocracy. His remarks are adapted from an essay-review of Milgram's Obedience to Authority, published in Commentary magazine.

1. Lawrence Kohlberg: A Question of Morality

Milgram's experiment was motivated partly by a sustained moral concern, the concern to understand and publicize the capacity of the "average man" to commit evil under certain social circumstances. The moral conclusions of the experiment for Milgram are that they engender a deeper understanding and sympathy with the banal perpetrators of evil, at the same time that they arouse the moral impulse to eliminate the authoritarian situations in which this can occur. Yet Milgram himself was unwittingly the moral victim of the "authority of science," just as his subjects were. Serving the authority of science under the banner of "objectivity," he, himself, inflicted pain on others for the greater social welfare. In this, however, he was no more determined, enslaved or irrational than his subjects. He thought, as many of them did, that inflicting pain in this situation was morally justified on the utilitarian grounds that the minor sufferings of his few subjects served the greater welfare of society through documenting certain truths.

Milgram's moral confusion was the confusion in moral philosophy characteristic of many contemporary intellectuals, whether "humanistic" or "scientific." Milgram, a utilitarian, failed to ask the question: "Is what I am doing just or fair to the individuals involved even if it is for the greater good?" Milgram failed to treat his subjects as persons, the basic meaning of the moral attitude, just as most of his subjects failed to treat the victim as a person.

While Milgram had utilitarian moral motives in conducting the experiment to teach society the limits of authority, he had no moral intention to actually produce this teaching effect in his subjects. His concern for his subjects was utilitarian: not to hurt them, to "cool them off" from feeling bad, rather than to engage them in an experience of moral learning. The harm of the experiment to the subjects was not so

much the pain they suffered in inflicting imaginary pain, but in its effect on their moral attitudes. As is well known by Milgram, there is a tendency for people to justify unethical behavior into which they are coerced. Some subjects he quotes did morally learn from the situation. These, however, were mainly the subjects who resisted and then found their resistance leading to an increased awareness of the moral limits of authority. Other subjects who obeyed "learned" something quite different. One said: "I acted just like Eichmann and I was surprised to find I enjoyed it." Others developed rationalizations for ignoring others' pain in situations of authority. Indeed, Milgram's appended apologies for the ethics of the experiment have a similar quality of rationalization: he is attempting to justify a procedure whose results he did not anticipate.

I do believe Milgram could have engaged in the experiment in a more ethical fashion. If the experiment had been used as a vehicle of moral dialogue and education for each individual subject, it might possibly have been justified.

2. Richard J. Herrnstein: Deception and Knowledge

Some people, often social scientists themselves, have objected to the element of deception in Milgram's experiments, especially when that deception is calculated to produce acute discomfort. This seems to me a valid concern, a secondary dilemma arising from the fact of the research itself rather than from its findings. To learn how people behave under duress or danger, the researcher dissembles, for he cannot subject people to real-life hazards. If there is to be experimentation on people in social settings, there is also likely to be deception and manipulation. It is an unpleasant prospect, and easy to reject. But, then, consider Milgram's experiments. Deception and manipulation led to a remarkable addition to our knowledge of the perils of authority. Knowledge like that comes hard and slow. Can we afford to prohibit further discoveries of that caliber and relevance?

Some people answer the question with a dogmatic yes, setting the highest priority on individual privacy at the risk of continuing ignorance. That happens not to be my view. I value privacy but worry about ignorance. A small, temporary loss of a few peoples' comfort and privacy seems a bearable price for a large reduction in ignorance, but I can see, as can Milgram, how delicate a judgment this implies. Even so, I hope there are other experiments like Milgram's coming along—experiments that will teach us about ourselves, with no more than the minimum necessary of deception and discomfort.

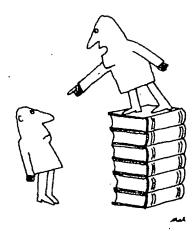
But there is another crucial dilemma raised by Milgram's work, one that will plague any political scheme that values both social order and

individual autonomy. On one side, we find that even permissive, individualistic America creates people who can become agents of terror. As the weapons of terror become more powerful and more remote from their victims, the dangers of obedience grow. We know that bombardiers in military aircraft suffer little of the conflict and anxiety shown by Milgram's subjects, for they inflict punishment at even greater distance and they serve an authority with greater license.

That horn of the dilemma is much in the news these days. But the other horn is the penalty we pay if we set too high a value on individual conscience and autonomy. The alternative to authority and obedience is anarchy, and history teaches that that is the surest way to chaos and, ultimately, tyranny.

Though he recognizes the alternatives, Milgram's sympathies are libertarian. He wants a more defiant citizenry, a higher percentage of disobeyers to authority. I have no doubt that it would be easy to make people more likely to say no to authority, simply by reducing the penalties for doing so. But the evidence does not suggest that people use only benevolence or moral sensitivity as the criteria for rejecting authority. Think of some real examples. Would it be greed or a higher virtue that would be the main reason for defaulting on taxes if the penalties were reduced? What deserter from the army would fail to claim it was conscience, not cowardice, once conscientious desertion became permissible?

Milgram, and no doubt others, would probably answer that reducing the penalties is not enough—that people need to be taught virtue, not just relieved of the hazards of vice. That is fine, but it does not seem like cynicism to insist that the burden of proof falls on those who think they know a way to make people better than they have ever been. I find no proof in this book, or in the contemporary literature of civil disobedience. Milgram's work, brilliant as it is, resolves no dilemmas.



LANGUAGE AND HUMAN COMMUNICATION

By Lewis Thomas

Like all other living things, human beings behave in good part in accordance with their cellular structure and genetic inheritance. But our biological makeup is far more complex than that of other forms of life, and so is our behavior. Here a noted physician and medical researcher reflects on human communication, as compared—and contrasted—with that of other animals.

Formerly chairman of the department of pathology at Yale University, Dr. Thomas is now president of the Memorial Sloan-Kettering Institute for Cancer Research. His book *Lives of a Cell* (published by Viking), from which the following two selections are taken, has been praised for exhibiting the wit and grace of a cultivated mind. It received a National Book Award in 1975.



Social Talk

ot all social animals are social with the same degree of commitment. In some species, the members are so tied to each other and interdependent as to seem the loosely conjoined cells of a tissue. The social insects are like this; they move, and live all their lives, in a mass; a beehive is a spherical animal. In other species, less compulsively social, the members make their homes together, pool resources, travel in packs or schools, and share the food, but any single one can survive solitary, detached from the rest. Others are social only in the sense of being more or less congenial, meeting from time to time in committees, using social gatherings as ad hoc occasions for feeding and breeding. Some animals simply nod at each other in passing, never reaching even a first-name relationship.

It is not a simple thing to decide where we [human beings] fit, for at one time or another in our lives we manage to organize in every imaginable social arrangement. We are as interdependent, especially in our cities, as bees or ants, yet we can detach if we wish and go live alone in the woods, in theory anyway. We feed and look after each other, constructing elaborate systems for this, even including vending

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machines to dispense ice cream in gas stations, but we also have numerous books to tell us how to live off the land. We cluster in family groups, but we tend, unpredictably, to turn on each other and fight as if we were different species.

Collectively, we hanker to accumulate all the information in the universe and distribute it around among ourselves as though it were a kind of essential foodstuff, ant-fashion, but each of us also builds a private store of his own secret knowledge and hides it away like untouchable treasure. We have names to label each as self, and we believe without reservation that this system of taxonomy will guarantee the entity, the absolute separateness of each of us, but the mechanism has no discernible function in the center of a crowded city; we are essentially nameless, most of our time.

Nobody wants to think that the rapidly expanding mass of mankind, spreading out over the surface of the earth, blackening the ground, bears any meaningful resemblance to the life of an anthill or a hive. Who would consider for a moment that the more than 3,000 million of us are a sort of stupendous animal when we become linked together? We are not mindless, nor is our day-to-day behavior coded out to the last detail by our genomes, nor do we seem to be engaged together, compulsively, in any single, universal, stereotyped task analogous to the construction of a nest. If we were ever to put all our brains together in fact, to make a common mind the way the ants do, it would be an unthinkable thought, way over our heads.

Social animals tend to keep at a particular thing, generally something huge for their size; they work at it ceaselessly under genetic instructions and genetic compulsion, using it to house the species and protect it, assuring permanence.



Man was not intended by nature to live in communities and be civilized.

Epicurus

Man is not only a social animal, but an animal that can develop into an individual only in society.

Karl Marx

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There are, to be sure, superficial resemblances in some of the things we do together, like building glass and plastic cities on all the land, and farming under the sea, or assembling in armies, or landing samples of ourselves on the moon, or sending memoranda into the next galaxy. We do these together without being quite sure why, but we can stop doing one thing and move to another whenever we like. We are not committed or bound by our genes to stick to one activity forever, like



the wasps. Today's behavior is no more fixed than when we tumbled out over Europe to build cathedrals in the 12th century. At that time we were convinced that it would go on forever, that this was the way to live, but it was not; indeed, most of us have already forgotten what it was all about. Anything we do in this transient, secondary social way, compulsively and with all our energies but only for a brief period of our history, cannot be counted as social behavior in the biological sense. If we can turn it on and off, on whims, it isn't likely that our genes are providing the detailed instructions.

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Man is the only animal that eats when he is not hungry, drinks when he is not thirsty, and makes love at all seasons.

Anonymous

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For practical purposes, it would probably be best for us not to be biologically social, in the long run. Not that we have a choice, of course, or even a vote. It would not be good news to learn that we are all roped together intellectually, droning away at some featureless, genetically-driven collective work, building something so immense that we can never see the outlines. It seems especially hard, even perilous, for this to be the burden of a species with the unique attribute of speech, and argument. Leave this kind of life to the insects and birds, and lesser mammals, and fish.

But there is just that one thing. About human speech.

It begins to look, more and more disturbingly, as if the gift of language is the single human trait that marks us all genetically, setting us apart from all the rest of life. Language is, like nest-building or hive-making, the universal and biologically specific activity of human beings. We engage in it communally, compulsively, and automatically. We cannot be human without it; if we were to be separated from it our minds would die, as surely as bees lost from the hive.

We are born knowing how to use language. The capacity to recognize syntax, to organize and deploy words into intelligible sentences, is innate in the human mind. We are programmed to identify patterns and generate grammar. There are invariant and variable structures in speech that are common to all of us. As chicks are endowed with an innate capacity to read information in the shapes of overhanging shadows, telling hawks from other birds, we can identify the meaning of grammar in a string of words, and we are born this way. According to [linguist Noam] Chomsky, who has examined it as a biologist looks at live tissue, language "must simply be a biological property of the human mind." The universal attributes of language are genetically set; we do not learn them, or make them up as we go along.

We work at this all our lives, and collectively we give it life, but we do not exert the least control over language, not as individuals or committees or academies or governments. Language, once it comes alive, behaves like an active, motile organism. Parts of it are always being changed, by a ceaseless activity to which all of us are committed; new words are invented and inserted, old ones have their meaning altered or abandoned. New ways of stringing words and sentences together come into fashion and vanish again, but the underlying structure simply grows, enriches itself, expands. Individual languages age away and seem to die, but they leave progeny all over the place. Separate languages can exist side by side for centuries without touching each other, maintaining their integrity with the vigor of incompatible tissues. At other times, two languages may come together, fuse, replicate, and give rise to nests of new tongues.

If language is at the core of our social existence, holding us together, housing us in meaning, it may also be safe to say that art and music are functions of the same universal, genetically determined mechanism. These are not bad things to do together. If we are social creatures because of this, and therefore like ants, I for one (or should I say we for one?) do not mind.

Information

...We store up information the way cells store energy. When we are lucky enough to find a direct match between a receptor and a fact, there is a deep explosion in the mind; the idea suddenly enlarges, rounds up, bursts with new energy, and begins to replicate. At times there are chains of reverberating explosions, shaking everything: the imagination, as we say, is staggered.

This system seems to be restricted to human beings, since we are the only beings with language, although chimpanzees may have the capability of manipulating symbols with a certain syntax. The great difference between us and the other animals may be the qualitative difference made by speech. We live by making transformations of energy into words, storing it up, and releasing it in controlled explosions.

Speechless animals cannot do this sort of thing, and they are limited to single-stage transactions. They wander, as we do, searching for facts to fit their sparser stock of hypotheses, but when the receptor meets its match, there is only a single thud. Without language, the energy that is encoiled, springlike, inside information can only be used once. The solitary wasp, Sphex, nearing her time of eggs, travels aloft with a single theory about caterpillars. She is, in fact, a winged receptor for caterpillars. Finding one to match the hypothesis, she swoops, pins it, paralyzes it, carries it off, and descends to deposit it precisely

in front of the door of the round burrow (which, obsessed by a different version of the same theory, she had prepared beforehand). She drops the beast, enters the burrow, inspects the interior for last-minute irregularities, then comes out to pull it in for the egg-laying. It has the orderly, stepwise look of a well-thought-out business. But if, while she is inside inspecting, you move the caterpillar a short distance, she has a less sensible second thought about the matter. She emerges, searches for a moment, finds it, drags it back to the original spot, drops it again, and runs inside to check the burrow again. If you move the caterpillar again, she will repeat the program, and you can keep her totally preoccupied for as long as you have the patience and the heart for it. It is a compulsive, essentially neurotic kind of behavior, as mindless as an Ionesco character, but the wasp cannot imagine any other way of doing the thing.

Lymphocytes, like wasps, are genetically programmed for exploration, but each of them seems to be permitted a different, solitary idea. They roam through [animal] tissues, sensing and monitoring. Since there are so many of them, they can make collective guesses at almost anything antigenic on the surface of the earth, but they must do their work one notion at a time. They carry specific information in their surface receptors, presented in the form of a question: is there, anywhere out there, my particular molecular configuration?...



There are many wonderful things in nature, but the most wonderful of all is man.

Sophocies

Men are ungrateful, fickle, hypocritical, fearful of danger, and covetous of gain.

Niccolo Machiavelli

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When the connection is made, and a particular lymphocyte with a particular receptor is brought into the presence of the particular antigen, one of the greatest small spectacles in nature occurs. The cell enlarges, begins making new DNA at a great rate, and turns into what is termed, appropriately, a blast. It then begins dividing, replicating itself into a new colony of identical cells, all labeled with the same receptor, primed with the same question. The new cluster is a memory, nothing less.

For this kind of mechanism to be useful, the cells are required to stick precisely to the point. Any ambiguity, any tendency to wander from the matter at hand, will introduce grave hazards for the cells, and even more for the host in which they live. Minor inaccuracies may cause reactions in which neighboring cells are recognized as foreign, and done in. There is a theory that the process of aging may be due to the cumulative effect of imprecision, a gradual degrading of information. It is not a system that allows for deviating.

Perhaps it is in this respect that language differs most sharply from other biologic systems for communication. Ambiguity seems to be an essential, indispensable element for the transfer of information from one place to another by words, where matters of real importance are concerned. It is often necessary, for meaning to come through, that there be an almost vague sense of strangeness and askewness. Speechless animals and cells cannot do this. The specifically locked-in antigen at the surface of a lymphocyte does not send the cell off in search of something totally different; when a bee is tracking sugar by polarized light, observing the sun as though consulting his watch, he does not veer away to discover an unimaginable marvel of a flower. Only the human mind is designed to work in this way, programmed to drift away in the presence of locked-on information, straying from each point in a hunt for a better, different point.

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If it were not for the capacity for ambiguity, for the sensing of strangeness, that words in all languages provide, we would have no way of recognizing the layers of counterpoint in meaning, and we might be spending all our time sitting on stone fences, staring into the sun. To be sure, we would always have had some everyday use to make of the alphabet, and we might have reached the same capacity for small talk, but it is unlikely that we would have been able to evolve from words to Bach. The great thing about human language is that it prevents us from sticking to the matter at hand.



Ryszard Twardoch in SZPIŁKI, Warsaw

ETHNICITY: A WORLD PHENOMENON

By Nathan Glazer



The past decade has seen a remarkable change in the language—and reality—of group relations around the world. Identifying people by the criteria of race, religion or class has become less meaningful than viewing them in terms of their "ethnic" allegiances. In the following article, abridged from *Encounter*, a leading American sociologist examines the emergence of a new worldwide trend in social conflict, based on "ethnicity," an identification that combines culture and biology in varying proportions.

Nathan Glazer is professor of education and social structure at Harvard University. His two most recent books deal with the subject of his present essay: Ethnicity: Theory and Experience, co-authored with Daniel Patrick Moynihan, the new U.S. Ambassador to the United Nations, and Ethnic Inequality and Public Policy, the tentative title of a volume scheduled for publication late in 1975. He is also co-author (with David Riesman and Reuel Denney) of The Lonely Crowd, a classic study of the American character.

re there some large discernible trends in the world—political, social, economic—that are leading in general to an accentuation of ethnic conflicts?

Admittedly, there are problems involved even in the exact determination of whether there is or is not an increase in "ethnic conflicts." Thus, we have the persisting conflict between the French and English speaking peoples in Canada. Is that an "ethnic" conflict, or a "language" conflict, or the struggle of a "suppressed nation" for independence? We have the division between "Indian" and "Spanish" elements in a number of Latin American countries. Are those "ethnic conflicts"? We have the tragic conflict between Protestant and Catholic in Northern Ireland. But isn't that an essentially "religious" conflict?

We have the movements for Scottish and Welsh autonomy in Great Britain; Breton and "South French" movements in France; the strain between Northern and Southern Italy. Some observers would define these as "regional" rather than "ethnic" movements. In each case an outlying section of the country has not shared in the prosperity of the center and this seems to have awakened some long dormant ethnic •1975 by Encounter Ltd.

consciousness. One doesn't know whether the group pressing for autonomy or more central government funds feels deprived because of an ethnic difference, or because of regional discrimination. The group has a choice as to which basis of deprivation it will emphasize.

I will not continue this tour around the world, but if I did we would find a host of conflicts in which race, religion, region, and nationality are involved. I have just seen numerous newspaper references to a conflict between the Kurds of Iraq and the Iraqis (they share the same religion), and between the Muslims and Christians of the Philippines. In both cases an international element enters into the conflict—because there are Kurds in Iran and Turkey, while the Muslims of the Philippines are linked (by religion as well as by former political connection and culture) with North Borneo, which is now part of Malaysia. Indonesia is also involved, at least distantly—because under a previous regime Indonesia dreamed of a "greater Malay empire" which included Malaysia and the Philippines.

Ethnicity and Race

Let me try to clarify these varying bases of group division which seem so diverse, and to justify a usage in which I label them all "ethnic." The term "ethnic" refers—and this is a usage that by now is quite common among sociologists and other social scientists— to a social group which consciously shares some aspects of a common culture and is defined primarily by descent. It is part of a family of terms of similar or related meaning, such as "minority group," "race," and "nation"; and it is not often easy to make sharp distinctions between them.

"Race" of course refers to a group that is defined by common descent and has some typical physical characteristics. Where one decides that a "race" ends and an "ethnic group" begins is not easy. Clearly, Swedes are (on the average) physically somewhat different from Frenchmen or Italians; but we normally don't use the word "race" to describe these differences. In European usage, on the other hand, at least until the time of Hitler, "race" was rather unselfconsciously used to describe what we would call "nations"—such as in the term "the genius of the French race." Race tends to refer to the biological aspect of group difference, ethnic to a combination of the cultural aspect plus a putative biological element because of the assumption of common descent.

It is possible for a race not to be an ethnic group. In some descriptions, Brazilians of the predominantly Negro race do not appear as an ethnic group because they are not particularly aware of a common culture different from that of other Brazilians. This is so also because they don't have a corporate self-identity as a distinct group, even though individuals are aware of their physical characteristics and are aware that these physical differences tend to be associated with some common group characteristics such as a lower income level or particular occupa-

tions. Recent accounts from Brazil seem to suggest that Negroes in Brazil may be becoming an ethnic group. This would fit in with one major theme of my article, that is, that the ethnic group is tending to become, in many countries, a more significant basis for social organization and for individual identification.

Religion and Social Group

"Race," then, refers to something more purely physical than ethnic group. "Religion," another significant basis of human organization, seems on the face of it a very different matter from ethnic group. Religions, in common understanding, are based on conversion and individual allegiance. The great religions—Christianity, Islam, Buddhism—include individuals of every race and ethnic group. In the specific realities of social intercourse, however, religious groups very often act as, and are felt as, ethnic groups. The overwhelming majority of people, after all, are born into a religion, rather than adopt it, just as they are born into an ethnic group. In this respect both are similar. They are both groups in which one's status is immediately given by birth rather than given by some activities in one's life.

Religions are generally in any given setting specifically associated with a defined ethnic group. Thus, in the Sudan and in Chad, Arabic-speaking groups in the north (which are Muslim) contrast with Negro groups in the south (which are pagan or Christian). In Nigeria, the northern language group (or tribal, or ethnic group) of Hausa is Muslim, while the Ibo and Yoruba are Christian. Thus, when a Hausa meets an Ibo, they assume the other's religion is Muslim and Christian, respectively. In the United States, almost all Poles are Catholic and almost all Swedes are Lutheran—if, that is, they have any religious affiliation. Aside from the normal close connection between religion and ethnic group, religion in itself is culture-forming, and thus fashions ethnic groups.

Thus "religion," except during periods of conversion and expansion, when members of many ethnic groups may be swept up in a religion, is in social context a category that very much resembles what we have called an "ethnic group."

Perhaps the most difficult question in setting a boundary to the term ethnic group is that of its relationship to caste: social groups defined by birth and by origin from some distant ancestors, intermarrying, traditionally fixed in a specific rung of the hierarchical ladder, and limited to specific occupations. "Caste" is identified primarily with India, and yet there are other cases. One famous one is that of the "Eta" or "Burakumin" of Japan. The Jews in medieval and early modern Europe were treated as a caste—they had a fixed low hierarchical position, intermarried, were limited to certain occupations, and had about them (to Christians) an air of ritual impurity.

Castes (theoretically) are permanent. One cannot "convert" to another caste, as presumably Jews could convert to Christianity, and thus lose the disadvantages of being Jewish. But it should be recalled that even converted Jews were viewed with suspicion in medieval Spain, and they were never really considered as authentic Christians.

State and Nation

This fairly lengthy introduction is, I feel, necessary in view of the widespread confusions, and in view of the fact that I will be referring on occasion to religious groups, racial groups, tribal groups, language groups, and be calling them all "ethnic groups." Let me try to justify this very inclusive term by answering the obvious question: What is not an ethnic group? Do I set any boundaries to the term? Yes, I do. After all, distant as our sociological studies are from the more respectable physical sciences, our terms must have some clear definition, and one means of making a clear definition is to set a boundary.

There are two important social forms that are *not* ethnic groups. One of them is the political community: the state and its members. The other major exception is one's social class.

Americans very often call a state a "nation," but in most European languages the nation refers very specially to the ethnic group, the state to the formal political organization which grants citizenship. The close link between nation and state arose because in the course of European history, and in particular in the 19th century, with the rise of nationalism, every nation demanded its own state. This led to the creation of modern Germany and Italy, the formation of ethnic European states (e.g., Bulgaria, Serbia, Albania) out of the Ottoman Empire, the breakup of the Austro-Hungarian Empire into its ethnic components, each organized as a state, and the creation of ethnic nation-states out of the western borders of the old Czarist Empire.

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Nature never rhymes her children, nor makes two men alike.

Ralph Waldo Emerson

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The United States is perhaps unique among the states of the world in using the term "nation" to refer not to an ethnic group but to all who choose to become Americans. "The American nation," a perfectly legitimate term, is not limited in its usage to those of a given heritage. Despite this, during the peace negotiations after World War I, President Woodrow Wilson (with his emphasis on national self-determination) insisted that every other ethnic group, under no-matter-what political organization, should have its own state. The vital contrast between nation and state was observed in large measure between the two World

Wars when so many of the independent states of the world were organized on the basis of a single dominant ethnic group. Those who remained as ethnic minorities within such states hoped for eventual reunion with the nation-state that represented their own ethnic group.

Break-up of Colonial Empires

In the post-1945 world the close link between state and nation, which had dominated the state-making efforts of the post-1918 peacemaking (and of the politics of Europe between the two World Wars), was again broken. For, most of the new states that were formed out of the colonial empires were not "nation-states," i.e., states representing a single ethnicity. And yet the world, in revulsion to war and conquest, had become strongly attached to "old boundaries"—any boundaries, set any way. The scores of new states formed out of the colonial empires simply accepted the old accidental colonial boundaries. These new states then were faced with the problem of—as they and others saw it—becoming "nations," moulding people of different ethnic groups into "Nigerians," or "Kenyans," or some other people.

The problems of the newly-independent states of Asia were somewhat different. There were ancient cultural traditions or imperial-state boundaries which did not make frontiers quite as arbitrary as they were in Africa. But even there—in Pakistan, India, Burma, Indonesia, Malaysia—the problem of creating a single nation became a severe one, varying in intensity from country to country. The problem in each case was: Would other identities—religious, linguistic, racial, and caste—submerge themselves in a new national identity? Or would they become (to use our problematic term again) ethnic identities, with some possible claim to their own kind of state existence? Would they soon be demanding political recognition of their separateness, with perhaps an ultimate claim to the right of secession?

The one social form, then, that is not an ethnic group is the state. This is so despite the fact that in European thinking (and, to some extent, in Asian) it is generally taken for granted that the ideal form of the state is one in which there is a state for each ethnic group, and one ethnic group for each state. In the circumstances of Africa, this is almost impossible—the conflict in creating any such format would be unbearable, and it has accordingly rarely been attempted.

There is certainly a tension between ethnic groups and states. As each state tries to become a nation, it attempts to reduce the intensity of subordinate ethnic claims. The problem is that both ethnic groups and states make claim to ultimate loyalty. And the state inevitably comes into conflict with any social form that has a competing claim to ultimate loyalty. At one time this competing claim was most strongly put forward by religion. With the decline of religion this competing claim is most strongly put forward by the concept of ethnicity.

States, then, are not ethnic groups, though the linking term "nation" can be taken as one or the other. Nations are not necessarily ethnic groups, though those that are not coterminous with an ethnic group try to create a new national identity, which (if they succeed) becomes a new ethnicity.

Social Class

There is one other crucial boundary limiting ethnic groups. Social classes are not ethnic groups.

One is not born an unskilled worker, a clerk, a professional. One is born into a family whose head may hold such an occupation. Some theories insist this means, in effect, that one's future occupation and income are fixed by birth. But if this were really so, we would not be so interested in "social mobility." Social mobility refers specifically to movements between the strata of society, from one occupation, income level, education standard, to another. Social mobility is a term that cannot be used to refer to the shift from one ethnic group into another.

Other terms are necessary. Just as "social mobility" applies specifically to the *class* phenomena of society, so do "assimilation," "acculturation," and "conversion" apply to the *ethnic* phenomena. These are rather more exceptional processes than those of social mobility.

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Man is a rational animal who always loses his temper when he is called upon to act in accordance with the dictates of reason.

Oscar Wilde

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They are not accepted—or expected—processes. It is true peoples assimilate to other peoples, and do change their ethnic identity over time. But it is more or less assumed that the ethnic stock remains immutable.

Thus "ethnic group," in my usage, refers basically to the vertical divisions of a society in contrast to the horizontal divisions. The horizontal divisions refer to class; the vertical divisions to ethnicity. Sometimes they coincide, as in the case of the Negroes in the American South, all of whom were, by definition, for a long time in the lowest class (or, in view of their inability to rise, caste). And yet the distinction was plain. As the blacks rose, socially, to become doctors, professionals, and white-collar workers, their class changed. But their ethnic group remained the same. Even in India, the classic land of caste, one observes a similar phenomenon. The correlation between caste and class becomes somewhat weaker over time. The caste groups do become, in my definition, "ethnic groups." Perhaps the best indication of this is that

the castes are increasingly called "communities" as the social positions of their members become more diverse.

The New Ethnicity

It is along the boundaries between ethnic group and state (on the one hand) and the relations of ethnic group and social class (on the other hand) that we have witnessed in the past two decades some striking new developments. These developments have made *ethnicity* a new and problematic force in domestic and international relations.

Let us take first the relations between states and ethnic groups. The old model of nationalism—for each nation a state, for each state a nation—has receded into the distance. It becomes more and more difficult to make it an effective basis for international organization. A number of developments have led to the recession of this model.

- 1. Too many new states have been created that are not, and cannot in the foreseeable future become, states of a given ethnic group. I refer primarily to the new states of Africa, and to some extent those of Asia. In these cases, we have seen the rise of a new concern with "nation-building." We have also seen the hopes for nation-building complicated or foundering on the basis of old lines of division—racial, religious, linguistic, tribal. Each division has taken the common form of ethnic group.
- 2. We have been surprised by the rise of new ethnic or quasi-ethnic identities in those states that were considered either models of contemporary modern nation-states, or successes in having subordinated their ethnic divisions to the "terminal loyalty" of the nation. Consider, for example, that model of patriotic unity in World War I-Belgium. Look at it today, increasingly divided between groups that place their terminal loyalty more and more in the ethnic group of Fleming or Walloon. Consider Canada in World War I and II, with its apparently total commitment to war for the sake of the common motherland. See how delicately it now tries to reconcile the claims of French-speaking and English-speaking groups. Consider the remarkable success of Scottish nationalism on the island of Great Britain, where ethnic divisions seemed a few decades ago fully reconciled in the new identity of being "British." The United States has seen the rise of the militant Black Power movement, the new Chicano (Mexican-American) movement and the American Indian movement. Those nations that are effectively single ethnic groups avoid such divisions. But few are so fortunate as, say, Sweden, or post-war Poland, made "pure" by massive population transfers. As old divisions in some states sharpen, others worry whether their old seams will rip open.
- 3. Many even of those older states that were ethnically homogeneous have become ethnically more heterogeneous as the economic developments of the post-war world have led to enormous migrations of

labor. In West Germany, 2.4 million "guest workers"—principally from Turkey, Yugoslavia, Italy, and Greece—now form 12 percent of the labor force. Switzerland has, proportionately, even more. France has taken its foreign workers in large measure from Algeria, Spain, and Portugal. England has seen a substantial migration from the West Indies, Pakistan, and India, creating a permanent "colored" population. In each of these countries the specific numbers and legal statuses vary; but in each of them a once remarkably high degree of ethnic homogeneity has been diluted by the introduction of new ethnic elements. The United States, formerly an exception in the world because of its formation as a state out of many different elements, becomes more and more typical—as England struggles with its own color problem, France wonders about the "integration" of the Algerians, and Germany considers how to educate the children of Turks and Yugoslavs.

4. The efforts of states, new or old, to achieve "ethnic purity" are not leading to ethnically homogeneous states. Burma expels its Indians; Uganda evicts its Asian community; and the Jews of several Eastern European states have migrated in large numbers to Israel. But, ironically, the attempts of some nations to become "ethnically pure" only complicate the problems of others. Britain's Asian community grows; and new Asian communities are established in other European nations as a result of the expulsion of Asians from Africa. The Jews leaving Eastern Europe enter an ethnically mixed Israel, which is not—and never will be—without a large Arab population. But the creation of Israel as a primarily Jewish state also created a Palestinian diaspora. The Jews are now matched in their dispersion by resident Palestinian groups in many countries, one of the developments that makes the conflict between those two peoples in the Middle East a world-wide one.

Aside from the fact that each nation's ethnic purification leads to another's greater diversity, one senses that the effort at purity, for most states, is a lost cause. Few black African nations are ethnically homogeneous. The attempt to create homogeneity by the expulsion of Asians seems as futile as an effort to empty the sea. In general, despite efforts to make some states "ethnically pure," more and more states are becoming multi-ethnic. Old ethnic divisions emerge in old states and new ones are created in new states.

Ethnicity and Social Class

And now to my second thesis on the relations between ethnicity and social class. My proposition here is that the Socialist hope for a transnational class struggle, based on class identification, never came to pass. Instead, it has been replaced by national and ethnic conflicts to which combatants have often tried to give a "class character." The first great defeat of the Socialist hope was in World War I, when the large Socialist parties of Germany and France became patriotic and

fought on the side of their respective bourgeois governments against their national enemies (instead of alongside their "class comrades" of other nations against their respective bourgeoisies).

The second great defeat came with the rise of the Third International under Soviet Russian domination. Despite the heightened rhetoric of class warfare that characterized the Third International's Communist parties, it became increasingly evident that they were serving the national interests of Russia. After World War II, Communism was more and more closely integrated into a number of national movements, particularly in China, Yugoslavia and Cuba. The language of international class warfare still persists. The reality, however, is quite different.

The antagonism of classes is severe in many countries (particularly the non-Communist countries of the developing world), but in most countries, national interests and ethnic interests seem to dominate over class interests.

Marxists try to interpret all conflicts as "class conflicts." Indeed in the ethnic conflicts of the post-War world there is always a class component. One group is more prosperous, owns more of the means of production, or is a more effective competitor in economic activities than another. Economic interest undoubtedly plays a role in ethnic conflict. But this is far from saying ethnic conflict is simply "masked class conflict." What, in the conflicts of Catholic and Protestant in Northern Ireland, of Hausa and Yoruba versus Ibo in Nigeria, Hutu versus Tutsi in Rwanda, Chinese versus Malay in Malaysia, Anglophone versus Francophone in Canada (and so on), is the "terminal community that effectively commands men's loyalty," to use one historian's definition of "nation"? I would say it is increasingly the ethnically-defined community rather than any exclusively interest-defined group. The evidence for this is too strong to be dismissed.

Impact on International Relations

In the light of these two propositions—that ethnicity becomes less and less coincident with state boundaries, and that ethnicity becomes a stronger basis for "terminal loyalty" than class—we can proceed to draw some consequences of importance for international relations.

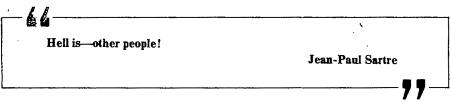
Let me first recall—and put to one side—the more traditional and better-known relations between ethnicity and international relations. These relations can be described as the effort to make ethnicity coincide with state borders. It has taken the form of "irredentism"—where one group, subjects of a state dominated by a different group, tries to rejoin the major part of the ethnic group in another state. Its other form is national independence movements, where an entire group is subject to a state dominated by another.

Obviously this is a real problem and still continues. But this, I would

suggest, is perhaps steadily less important in the relations between ethnicity and international conflict—because of the previously-mentioned fact that state borders have become oddly immutable. Multi-ethnicity used to appear as "irredentism." But, increasingly, what we would once have called "irredentism" must be called simply multi-ethnicity. There is no easy way to make ethnic boundaries and state boundaries coincide. Ethnic groups, owing to migrations and economic interrelationships, are less and less definable by physical boundaries.

It is these new tendencies towards *multi-ethnicity* (combined with other social developments) that, in my view, create new problematical relations between ethnicity and the inter-state system.

One of the most important of these developments is the creation of an international system of communications. It makes the spread of ideas and ideologies from one state to another, from one troubled situation to another, ever more rapid and effective. "Ethnicity," as a part of culture, always had to be taught. But it used to be taught by parents to children, by teachers to students, by leaders to followers i.e., in traditional settings. More and more, ethnicity and its possible implications are taught by the mass media. One group learns from another, and picks up its language, its demands, its resentments, its form of organization. It has become commonplace to say that the blacks have through their example taught other ethnic groups in the United States to raise certain demands, to use a certain language, to feel resentment at exploitation and subordination in contexts which they had previously accepted. This is obviously true. What is striking to me is how much the movement of black militancy has affected other groups in other countries.



In the West Indies, we have seen the emergence of "Black Power" movements—a rather unlikely term, since these movements are directed against black establishments as well as white economic interests in largely black societies. (But the power of the American term, spread by the mass media, was evidently irresistible.) Northern Ireland has its own deep religious conflict, with an even longer history than that of blacks and whites in America. But Catholic protest in the 1960's was called the "Civil Rights" movement, in clear imitation of the black "civil rights" struggle in the United States. The "Oriental" Jews in Israel (of lesser education, income, and power than the "Western" Jews) had their own grievances; but their activists took the name "Black Panthers," borrowing that term from the American struggle.

And, similarly, the developing color conflict in England has been influenced, on the part of the Asian and black groups, by developments in the United States, and on the part of government, by the actions taken in the United States.

These examples of the international communication of ideas, slogans, demands, with one ethnic group and one ethnic struggle influencing another, also reflect, of course, the dominant position of the United States in the world-wide configuration of communications. But the communication is not, I believe, all one way. The image of the Palestinian Freedom Fighter has been as heavily imprinted on world public opinion as the images of a Martin Luther King or an Angela Davis.

The new patterns of communication are, I believe, one of the most potent forces in insuring that ethnic concerns and ethnic issues will remain serious forces and will indeed grow in seriousness. The increasing ease of air travel-combined with the existence of wide economic disparities between nations and the increasingly liberal attitude toward immigration of European states and other states with populations of European origin—guarantees that every ethnic group can develop a diaspora. It thus makes its problem of significance to more than one state and its neighbors. The ease of air travel also means that ethnic struggles can be fought out on a world-wide stage, involving nations that are on the surface completely removed from the struggle. The Israeli-Arab struggle has, perhaps, had the widest geographical scope, as letter-bombs explode in England, India, and Malaysia. The Indian-Pakistani struggle also has its international scope, as young Pakistanis are killed in the attempted seizure of Indian offices in London. Croatians, now settled in Sweden and Australia, carry on their warfare against Yugoslavia.

A World Conscience

Thus a number of factors, it seems to me, are leading to the internationalization of ethnic conflicts, to a "universalization of ethnicity." There is, first, the increasing difficulty, if not impossibility, of making ethnicity and state coincide. Secondly, there is the rapid growth of international communications, which has heightened ethnic consciousness everywhere. About a third factor leading to the internationalization of ethnic conflict I am less certain. But I think I can at least propose as an hypothesis that we are, increasingly, refusing to accept as moral—and by "we" I mean what may be vaguely called an international community of public opinion—the exploitation or persecution of an ethnic minority by a state. We increasingly refuse to accept this as an "internal" matter. The international relations of South Africa, Rhodesia, and Portugal are decisively affected by their racial policies. Soviet Russia has been insistent that all conflicts affecting its ethnic groups are purely internal matters—but the Russian Jews have suc-

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cessfully challenged this position by making their demands for emigration a matter between states (in this case, the United States and Russia). The treatment of American Negroes certainly affects America's international image—the cases of Angela Davis and other black militants received as much attention in Western Europe as in the United States. The developing world has tried to argue that its ethnic conflicts should be left to itself, and that the outside world should not intervene. But no ethnic issue can remain simply an intra-state issue, in part because of the developing world conscience which tries to reconcile state claims with ethnic claims which are more and more felt to be legitimate.



Men are very queer animals—a mixture of horse-nervousness, ass-stubbornness and camel-malice.

T.H. Huxley



I now return to the initial question: Why have ethnic identities and demands become so significant in so many different countries, with such varied historical backgrounds and economic and political institutions? Perhaps the most ambitious general theory argues as follows. In the modern world there is a loss of traditional identities because of the trends of modernization—urbanization, new occupations, mass education, mass media. Since there remains in mass society a need in the individual for some kind of identity—smaller than the state, larger than the family—new ethnic identities are constructed.

Another theory focuses on the rising tide or egalitarianism, which legitimates a group's demands that its deficiencies (in income, occupation, political power) be made good, and now. Why, however, does not the egalitarian thrust emphasize occupational and class identities more? Why does it not lead to more class conflict, and less ethnic conflict? Clearly, the appeal to ethnic identity draws upon more emotional layers of the human and social personality than does the appeal to class identity. It touches on such primal things as one's language and religion, one's earliest family experiences, one's physical self-image.

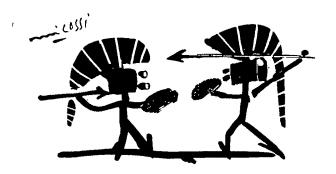
The Future of Ethnicity

For all of the reasons I have noted, ethnicity seems to have become a permanent force in the modern world, and the multi-ethnic form is becoming increasingly common within each nation. It is urgent, therefore, to recognize the need in each country for new approaches to the handling of multi-ethnic conflict. In the historic past, powerful and forceful assimilation was a dominant approach, combined with permanent subordination of certain groups called "inferior." Neither approach will survive long in the contemporary world. The spirit of

egalitarianism assures us that each group will make its claim to just and equal treatment and will find strong support for its claims. Perhaps the answer to multi-ethnicity in each country will be a situation in which each group has guaranteed rights and guaranteed shares in the economy, the polity, in social life. It is possible to emphasize different parts of this solution: either guaranteed shares for each group, or guaranteed rights for each individual and each group.

The United States in the past seemed to find the approach in terms of "guaranteed rights" more congenial than the approach in terms of "guaranteed shares"; but recently Americans have begun to take individual rights less seriously, and to take group shares more seriously. I think the American experience will prove to be only one of the possible ways in which a modern state deals with the problems of multi-ethnicity. Our experience—since we are the most diverse and complex of multi-ethnic societies—may serve as "a model" for some, may at least serve as a storehouse of trial-and-error experience for others who come to view what we have done and consider whether they should go and do likewise.

Yet aside from conflicts within nations, the world-wide spread of ethnicity as a significant basis for political action raises serious questions about the relations between nations. In a world in which the "class-interest" concept of Marxism competed with the "universalist" confusions of liberalism, the problems of ethnicity, as a source of conflict within nations and between nations, have generally appeared as simply a left-over embarrassment from the past. It is my conviction they must now be placed at the very center of our concern for the human condition.



THE SPECTER OF EUGENICS

By Charles Frankel



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Recent discoveries in biomedicine have led some scientists to welcome the prospect of planning the future human race by techniques of genetic control. In contrast, religious and other opponents of this view advocate a strict limitation of biomedical research and absolute non-interference with "the law of nature." The author takes issue with both positions and suggests an alternative approach to the moral and social issues involved.

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new theme has emerged to dominate the discussion of the moral and social responsibilities of medicine—not how to humanize medical services, but how to re-engineer the human race. This theme has in recent years affected the curricula of medical and law schools, led to the creation of new research institutes and to proposed legislation, and produced a stream of sociological, moral and philosophical reflection.

The occasion for this preoccupation is the advent of "biomedicine," a package of dazzling biological discoveries and new medical techniques. Biomedicine, we are told, is the harbinger of the day when man will be able to say of himself, meaning it entirely, that, at last, he is his own greatest creation, and has got the weight of that other Creation off his back. Existentialist philosophers have accustomed us during the past generation to phrases like "man invents himself." But they have meant these dark utterances metaphorically, metaphysically. Biomedicine, it would appear, gives them a literal meaning. If what is said about it is true, mankind is on the verge of being able to make itself, in a quite physical sense, its own principal artifact.

But only if what is said is true. One who is not a geneticist or physician must speak with diffidence, but I am not myself persuaded that all the miracles that have been announced as at hand are really about

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to materialize. Nevertheless, even a restrained account of recent developments will suggest why people not excessively given to utopian or apocalyptic solemnities believe that biomedicine poses unprecedented moral issues.

Genetic Diagnosis

The excitement that biomedicine arouses begins with its fundamental achievement, the breaking of the genetic code, an accomplishment as stunning for its intellectual brilliance, and as important, in all probability, for the history of science as the first discoveries in nuclear physics. The manner in which the genes send out the "messages" that control the development of the organism is now basically understood. A large part of what used to be called "the secret of life" is therefore open for investigation, and presumably for manipulation and redesign. Human cells growing in tissue culture, for example, have been made to undergo inheritable changes when infected by a virus or treated with foreign genetic matter. To take another example, the first week of human fetal life has been reproduced entirely under laboratory conditions: sooner or later, we are told, test-tube babies will materialize.

Together with these fundamental discoveries, an array of experimental and clinical techniques has been developed that change practical perspectives on birth, maturing, aging, dying, sexuality, and the relations of parents to children, and that can alter or undermine the private rights hitherto associated with the most intimate areas of human experience. Prenatal diagnostic procedures have been discovered which permit the determination of the sex of the fetus and the presence in it of hereditary abnormalities. With the advent of legal abortion,



The history of man is a series of conspiracies to win from nature some advantage without paying for it.

R.W. Emerson



"planned parenthood" has thus acquired a new dimension: it comprises control not simply over the number of children but over their sex and physical and mental quality. At present it is possible through prenatal diagnoses to detect 60 genetically-caused defects, among which the best known and most widespread is probably mongoloidism, and it is expected that in a few years the list will be almost doubled. The advent of these diagnostic procedures has led to new ideas about the opportunities and responsibilities of preventive medicine and publichealth programs. In a program of mass screening of pregnant women, for example, women diagnosed to be carrying genetically defective children would be advised—or, in some plans, required—to take cor-

rective action, ranging from dietary changes to chemical therapy to abortion.

Methods of genetic diagnosis are now so advanced, indeed, as to permit the envisaging of systems of universal genetic examination, instituted well before pregnancy, to permit the detecting of individuals who, although themselves healthy, are the carriers of dangerous genes in a recessive state. Such people could be advised to stay away from people of the opposite sex who carried the same recessive genes; an alternative would be to recommend that they adopt children or have them by artificial insemination. Stronger measures could also be advised or required. The suggestion has been made by advocates of compulsory population control, for example, that boys and girls be inoculated against fertility at puberty. A more modest variation would be to inoculate the carriers of recessive genes for certain diseases.

Planned Reproduction

By such techniques the long-range purpose of reducing the proportions of troublemaking genes in the collective human gene pool could be accomplished. The pursuit of this purpose, according to many geneticists, is an increasingly urgent imperative. The advances in medicine over the past century have decreased the significance of "natural selection" in keeping the genetic heritage of mankind relatively uncontaminated. People afflicted by inheritable diseases live to pass them on, as do people who carry mutant genes. The result, some generations away, will be a "génetic load" of abnormalities and deficiencies painful and expensive for the species to bear.

Fortunately, however, the scientific progress which has caused this problem also has presented us, it is pointed out, with the potential solution. The planned production of children is the alternative, in this perspective, to the degradation of the human stock. Nor need a sufficiently motivated society restrict itself to genetic planning for wholly negative purposes like reducing the contamination of the human gene pool. The technical capabilities already exist, enthusiasts for genetic planning point out, to set about systematically to improve the human breed. Artificial insemination using stored sperm is a well-established procedure. Thus, all that is needed is a proper system of social planning, and women a hundred years from now will be able to have children by the greatest artists or statesmen of our time. Also, experiments have been performed indicating the possibility of making up for genetic deficiencies by implanting the needed genes. Gene therapy, chemical or surgical, thus appears to be a quite possible, if not immediate, medical procedure.

Finally, the story cannot be complete without mention of "cloning," a process of transplanting cells which permits an indefinite number of genetically identical beings to be produced from a single individual,

without the blessing of sexual fertilization. Whether the cloning of human beings will be technically feasible in the near future is a matter of dispute, but the experiment has been performed successfully with frogs, from whom no complaint has been heard. Cloning would permit people to reproduce themselves in the literal sense, to duplicate themselves genetically with exactness, a more fulfilling procedure, it must be supposed, than the messy process of ordinary procreation, which leaves so much to the random fall of the genes.

Since advancing research also indicates that the rate of aging can be significantly slowed by diet, drugs, and genetic recoding, a new prospect opens: a world populated by centenarians in glistening health, surrounded by preselected carbon copies of themselves of assorted ages. Gone are those children with the unexpected traits that make a man or woman wonder out of what nest they came. At last we will have the young just how, and where, we want them.

Experience of the Past

Most important technological innovations, to be sure, raise questions about the designs of the human species on or for itself. Even technological innovations that do not involve direct probings inside the human body produce changes in human thinking, feeling, and conduct. Nevertheless, biomedicine differs in significant ways from other kinds of technology.

Biomedicine involves introducing changes in the human creature different in a fundamental respect from those that have followed technological and scientific innovations in the past. People did not intend to reduce the average height of the British lower classes when they introduced the factory system, and they had no plan to change the formative experiences of adolescence when they welcomed the Model-T Ford. Biomedicine, in contrast, involves the deliberate, not incidental or inadvertent, modification of the human organism; and it involves, besides, making changes that will be irreversible. Rightly or wrongly,

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Man is but a reed, the most feeble thing in nature, but he is a thinking reed.

Blaise Pascal

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people in the past could make decisions about the introduction of technologies without thinking about the consequences. In the case of biomedicine that fine freedom is gone. Its various techniques may be widely adopted, and the consideration of consequences may be minimal, but the process will involve a conscious and deliberate refusal to think. Biomedicine has eliminated the insouciance with which most

people have embraced technological progress. It forces consideration not simply of techniques and instrumentalities but of ends and purposes.

Society as Omnipotent

The current enthusiasm for biomedicine expresses an idea that weaves through large parts of contemporary intellectual culture, uniting B.F. Skinner's scheme for salvation through "operant conditioning" to Herbert Marcuse's version of Freud and Marx, to the programs of radical feminists. The idea is that of a human animal wholly malleable; of differences between the old and the young, between the sexes, between nations and individuals with varying life experiences, as essentially superficial, like the dirt on a shirt collar that comes out in the wash. Society, the thought goes, entirely forms men and women. Provided only that people are willing to recognize the Good and do it—"to take active personal responsibility for the human future"—society is capable of wholly re-forming them.

The new genetics, though it stresses heredity, has paradoxically proved to be capturable by this idea of the omnipotence of society. "Society" will simply engineer heredity. In the words of the late Hermann Muller, a Nobel laureate, programs of planned eugenics provide the opportunity to guide human evolution, to make "unlimited progress in the genetic constitution of man, to match and re-enforce his cultural progress and, reciprocally, to be re-enforced by it, in a perhaps never-ending succession." Such hopes justify a certain impatience in the methods used to achieve them. Hermann Muller complained, for example, about the carelessness with which society allows people to procreate freely, and then deals with the unhappy consequences by therapy, surgery, or the abortion of defective fetuses. Another Nobel laureate, Linus Pauling, has recommended that people diagnosed as carriers of genes associated with serious diseases like sickle-cell anemia be prevented from marrying and be conspiciously marked so that they will be warned against falling in love.

To be sure, Professor Pauling gives no guidance about what to do if, in this corrupt age, such people have children without marrying, or, though one hates to contemplate the possibility, without even falling in love. Nor does he discuss in detail the complications that would follow from the adoption of his proposal in a society guaranteeing certain basic liberties to all, regardless of their hereditary category.

There are mounting signs that the eugenicists' dream of a remade human breed, so long in disgrace in consequence of Nazi forays into the field, may be on its way to a comeback. Indeed, existing practices provide a setting in which the idea of broad eugenic planning may seem hardly more than an extension of what is known and accepted. We endorse compulsory vaccination and chest X-rays for school children. Why not mass genetic screening or other methods for avoiding

the transmission of hereditary defects or for accomplishing the improvement of the human stock?

A host of gathering trends in our society favors this easy transition: the pressures for population control; the declining death rate; the growing costs of supporting the old, the sick, and the handicapped; the size of the welfare population and the resentments caused by its existence; the altered standards regarding abortion; the movements in law and morals which, with accelerating force over the last generation, have facilitated the decline of the family and of the marital idea. And to these must be added the growing disappointment or cynicism about the possibility of social improvement through institutional reform. On the Right, people can look with sympathy on eugenics, envisaging the program's being tried on others, not on themselves. And on the Left, biomedicine speaks to the hope, ever rising from the ashes, that the human race can still be made over by proper planning.

Religious and Moral Opposition

There are others who have responded to biomedicine with the view that it hasn't changed anything at all except man's chance to do evil: the old moral absolutes remain as valid as ever and had better be reaffirmed. The position taken by Father Robert Drinan on the specific issue of abortion is typical of the reactions of traditional religious and moral absolutists to the more sweeping issues raised by biomedicine:

The integrity, the untouchableness, the inviolability of every human life by any other human being has been the cardinal principle and the centerpiece of the legal institutions of the English-speaking world and, to a large extent, of every system of law devised by man.... It will be a tragedy beyond description for America if the question of legislation on abortion is resolved on sentiment, utilitarianism, or expediency rather than on the basic ethical issue involved—the immorality of the destruction of an innocent human being carried out by other human beings for their own benefit.

There is a less explicit, but probably even more influential, form of absolutism than that advocated in orthodox theological circles, which is espoused by a good many people who would use words like "liberal" and "progressive" to describe themselves. There hovers about biomedicine the scent of ancient taboos broken, of entry into forbidden territory. It stirs to life fears that go back to the oldest myths in our civilization, and revives religious attitudes about sin, "trespass, and tinkering with the delicate harmonies of the Creation that lie just below the level of consciousness even in agnostics and atheists. And so there is an impulse simply to condemn the dark powers that have brought the evil thing to be.

A few years ago it was a rare day when one heard the suggestion openly made within the university world that certain kinds of purely theoretical research should be banned. But nowadays that recommendation is made daily, without apology or obfuscation; and among the avenues of inquiry nominated for this honor, biomedicine rates very high. Its emergence is partly responsible for the heating up of the hostility to technology and science, and for the reawakening of suspicion toward the basic principles of intellectual freedom and rational thought.

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Man is a rope stretching from the animal to the superman—a rope over an abyss.

F.W. Nietzsche

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Biomedicine, in sum, has psychic and moral reverberations that go far beyond its immediate subject matter. On the one side, it reawakens the impulse to regulate and control, to suppress the unplanned, the random, the offbeat. On the other side, it arouses the desire to stand on the unchanging truths of the ages, and to fear and resist the play of the mind for its own sake. The discussion of biomedicine has a hidden agenda as significant as its explicit one.

There are some cautionary considerations which I have found helpful in interpreting the significance of biomedicine.

Despite advances in genetics, first of all, the debate about the relative significance of heredity as against environment remains unsettled with respect to the most important human traits. Moreover, settling it is impeded by the difficulty of separating environmental from hereditary influences. Is the slow-witted child of a slow-witted mother who ignored it when it was an infant a victim of heredity or environment?

Even when we know that traits are wholly inherited, like blue eyes, or partly inherited, like height, the recent developments in genetics do not necessarily put us in a position to produce inheritable traits by plan. Many of these traits are "polygenic": it is the co-presence of a number of genes, not any single gene, that is responsible for them. Rectifying these traits is therefore a complex matter, and runs the risk of affecting whole clusters of traits in undesired ways.

Negative vs. Positive Eugenics

There is, in addition, a fundamental difference between "negative eugenics" and "positive eugenics." "Negative eugenics" aims only to eliminate a genetic defect. It has a definable target, and the evil it seeks to combat is reasonably unequivocal. "Positive eugenics," in

contrast, aims to produce a new breed possessing, (in geneticist Hermann Muller's listing) "on the physical side, more robust health; on the intellectual side, keener, deeper, and more creative intelligence; on the moral side, more genuine warmth of fellow feeling and cooperative disposition; on the apperceptive side, richer appreciation and its more adequate expression." Apart from the fact that we do not know that these characteristics are primarily genetic in origin, they represent highly ambiguous concepts.

"Keener, deeper, and more creative intelligence" covers a variety of possibilities ranging from Mozart to Napoleon; "cooperative disposition" often shows itself in warmth of fellow feeling for one group and indifference or hostility to people in others; even "robust health" has a variety of meanings: shall we aim, in our eugenics program, at heavyweight prizefighters, or at wiry, resilient little men with the power to spend long hours at their desks without falling ill? In sum, "positive eugenics" aims at gross targets, and, in practically every case, at ill-defined and incoherent ones.

Moreover, "positive eugenics" makes no sense unless it is practiced on a broad social scale. It thus involves, at the least, the use of high-pressure propaganda methods, which its devotees are likely to call "education for social responsibility," and it probably necessitates legal coercion. It has the further inconvenience of inviting people to think of themselves as stud animals.

Even in the case of "negative eugenics," a distinction has to be drawn between individual action and a general program directed at cleaning out the human gene pool. It is one thing to say that people should have the right to make an informed choice concerning whether they will have a child suffering from Tay-Sachs disease. It is quite another thing to engage in genetic counseling or other measures with a view to reducing the proportion of Tay-Sachs genes transmitted to the human gene pool by people who carry them in a recessive state.

For example, some genes responsible for serious diseases are, in their recessive states, also beneficial. The gene for sickle-cell anemia appears to have been associated with heightened resistance to malaria. Further, the "dirtying" of the gene pool, as it is called, is a long-term process, for which medical progress may be expected to provide some remedies. Diabetes, a hereditary disease, is no longer commonly a lethal one.

The Virtues of Variety

The lesson to be drawn is an old one: probably the greatest biological resource of human species is its variety of genetic strains. Unless we can know precisely what the future environment will contain in the way of foods, germs, climate, work, and numberless other aspects of life, caution is advisable with regard to the adoption of plans for the

elimination of genetic traits whose present disutility may be a passing phase.

But if the facts of genetics make the effort to recast the human species inadvisable, the facts about human desires make it doubly so. For people are probably wisest, they understand their desires best, when they are aware that they do not know what they desire human beings to be forever and ever. In time of war, the qualities sought are resilience, discipline, loyalty, physical courage; in time of peace, people praise flexibility, independence, prudence, moral courage. Assuming that we had the requisite powers, shall the moods and needs of a decade or half-decade be permitted to affect the permanent temperament of mankind?

More prickly still is the consideration that a kind of systematic doubletalk infects most descriptions of morally desirable characteristics. "He is stubborn," I say, describing behavior which, in my own case, I call "acting on principle." "Cooperativeness" is a common candidate for moral praise; still, those who cooperated with the Nazis are called "collaborators." "Initiative" is praised but not "aggressiveness," "individualism" is admired but not "egoism."

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Man is more fragile than an egg and harder than rock.

Yugoslav proverb

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As Aristotle observed in his *Ethics*, virtues are contextually defined. An action which, in one set of circumstances, is courageous is, in another set of circumstances, foolhardy. It is the characteristic of a fully virtuous man to know when, and to what extent, to give a particular disposition or attitude its expression. Judgment and emotional imagination are the crucial ingredients in this. Anyone who has a list of simple, unambiguous moral traits by which he would define the good man reveals that he lacks precisely these qualities. Yet they are the indispensable prerequisites for planning the future.

Finally, all of these considerations say nothing about the classic political problem of distributing burdens and benefits. Biomedicine's techniques, however refined, cannot solve this problem. Consider even the relatively simple and easy-to-define issue of eliminating recessive genes for specific diseases from the human gene pool. A hundred such diseases will shortly be diagnosable by genetic screening, and many more, presumably, after that. A very large proportion of the human beings alive, perhaps all, will be found to be carriers of this or that dangerous characteristic. Who shall submit to biological nullification and who shall not? Genetic planning introduces a new reason for human quarrels but gives us no logic for solving them.

Freedom and Choice

If these considerations have any merit, there are no reasons for abandoning established principles of freedom of individual choice where biomedicine is concerned. The deliberate broad-scale regulation of man's procreative life requires powers of intelligence, imagination, and emotional perspective not within the human range. The observation applies equally, I believe, to those who would redesign the human species through eugenics and those who would place absolute barriers in the way of using biomedical knowledge to alleviate individual woes. In both cases, it seems to me, people are being asked to sacrifice the direct and immediate emotions that surround the procreating and bringing up of children to an abstract idea. It is not a prudent policy or a feeling one.

The ethical-political maxim that the present generation ought to sacrifice itself for an unidentified posterity has usually led to suffering not only profound but useless. People regularly do pay attention to the future, and make sacrifices for it, but for reasons of specific affection: they care for their children and grandchildren. I am inclined to think this a surer and sounder basis for choice than the hope for a new breed or the fear that absolute moral principles will be sullied.

It may appear unfair to apply these strictures against unrestrained abstractionism to moral opponents of eugenic planning like Father Drinan, who seem to wish only that new scientific knowledge not be permitted to tear us loose from firm and tested ethical moorings. I confess that I feel considerably more sympathy with their views, with their creature caution, their sense of knowing what they know and preferring it, than I do with any eugenic Grand Design. Yet the reactions of religious absolutists like Father Drinan seem to me unrealistic. Positions like theirs are not likely to prevent the acceptance and widespread use of biomedical techniques; but they are likely, through their intransigence alone, to impede efforts to deal with biomedicine with prudent restraint. And most directly related to the present point is the consideration that, like eugenicists' plans, they allow an idea to soar away from any identifiable context.

"The sanctity of human life," for example, undoubtedly expresses a value, but it doesn't exist alone. The duty not to cause avoidable suffering surely also makes a claim on us. So does the duty to use limited human resources discriminatingly. This sometimes involves making distinctions among kinds of life, including, if necessary, distinguishing a fetus' life from an infant's. Recognition of the plurality of human duties is not properly described by words like "sentiment," "utilitarianism," or "expediency."

I do not find persuasive the first principle Father Drinan suggests— "the immorality of the destruction of any innocent human being carried out by other human beings for their own benefit." Like all such principles it fails as a guide in all cases. How does this principle apply to just wars, for example? Does it say there are none? Or that in war there are no innocents? How does it apply to common peacetime enterprises, like coal mining or bridge building, to which civilized and decent people give support every day, and which involve the predictable deaths of some human beings for the benefit of others?

Admittedly, there is always, as classic arguments maintain, the danger of "the slippery slope." It can be said that once the decision has been taken that a fetal life can be aborted because it is unwanted, we are moving down the slippery slope that will lead to the taking of innocent adult lives because they are unwanted. But there are other slippery slopes. It seems to be also arguable, and somewhat more convincingly, that when people permit otherwise avoidable suffering to take place in the name of such speculative possibilities, they are halfway down the slippery slope that leads to the righteous punishment of their fellows for the sake of an abstract creed.

The fact is that any principle has its slippery slope. One meets that danger by combining it with other principles and not allowing one-self to be guided by it alone. Thomas Aquinas, no enemy to absolute values but not a moral innocent either, observed in the Summa that the law of nature, "as far as general first principles are concerned," is the same for everybody, but that when we get down to particular cases, "it can admit of exceptions," and is applicable unchanged "only in the majority of cases." Few people who have looked closely at the concrete situations, each different from the next, in which, let us say, the parents of predictably mongoloid children have to decide about abortion, have been capable of coming up with unbreakable rules on the matter.

Danger of Genocide

As for the notion of suppressing biomedical research because it involves playing with the ultimate secrets of nature, the impulse to adopt such a view is understandable but not the ease with which some members of the intellectual world are giving in to it. That biomedicine has given mankind powers which it is capable of using for ill is evident. Technologies of extraordinary power have been turned loose in contemporary society without even the simulacrum of thought about the consequences, and now we have one more. But the research that leads to test-tube babies is also the research that leads to a better understanding of cancer. Inquiry goes where nobody can predict, and technologies are useful for good and ill. For while technology is equivocal in its consequences, one thing is not—the damage that ensues, almost always very quickly, when a field of inquiry is banned because it is said to conflict with higher moral laws. The number of subjects

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that can come under this ax is indefinitely large. The character of the people who have in the past wielded this ax is not reassuring.

Nor is the naiveté of eugenics planners. Professor Pauling, in a society that has run into some trouble in consequence of its habit of categorizing people by race, proposes that people be visibly marked when they carry bad genes! And others, from Hermann Muller down, envisage the planned production of a new human breed without facing the implications for their plan of the persistence of national sovereignties. Redesigning the species is not possible except under the strongest of world governments. If it were known that the object of such a government was to make a new breed, the arguments over which present breed should be the principal model would be likely to be considerable. There would probably be words like "genocide" thrown around. This would not facilitate the attainment of such a government, which, even under present circumstances, is not precisely easy to create.

The most astonishing question of all posed by the advent of biomedicine, probably, is why eminent intellectuals so regularly give themselves to unbounded plans for remaking the race. The factor responsible is not biomedicine; something else can be the catalyst tomorrow. It is the larger idea which has shaped the major traumatic events of the last three hundred years of modern history: the deliberate intention to create a "new man," to redo the human creature by design. That is the modern idea of Revolution, an idea not entertained in the ancient world except as a matter of faith, miracles, and the destruction of temporal things. It is what has lifted revolution in the modern world above purely mundane concerns like overthrowing tyranny, or putting more capable or decent people into power, and has made it a process of transcendent meaning, beyond politics or pity, and justifying any sacrifice. These are the accents with which Sir Francis Crick, still another Nobel laureate, speaks, when he states his belief that no newborn infant should be declared human until it has passed certain tests regarding its genetic endowment, and that if it fails these tests it forfeits the right to live.

The partisans of large-scale eugenics planning, the Nazis aside, have usually been people of notable humanitarian sentiments. They seem not to hear themselves. It is that other music that they hear, the music that says that there shall be nothing random in the world, nothing independent, nothing moved by its own vitality, nothing out of keeping with some Idea: even our children, in that view, must be not our progeny but our creations.

WORLDS ON FILM

By Vernon Young

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Cinema has always been an international art, but until fairly recently an art (as well as a commodity) dominated by the products of comparatively few countries. Lately, observes a noted film critic, original and compelling motion pictures have been produced in Asian, East European and Latin American nations which formerly carried little weight on the international cinema scale. His article offers a highly selective and opinionated global tour of movies.

Vernon Young has been writing about worldwide film-making for *The Hudson Review* over the past two decades. He has also been the European correspondent for *Arts Magazine* and a contributor to *Art International*. His most recent books are *On Film: Unpopular Essays on a Popular Art*, and *Cinema Borealis*, a study of Ingmar Bergman and Swedish film in general.



In conversation not long ago with one of those who, like ourself, has an insatiable appetite for movies from faraway places, we were taken aback by his solemn declaration that the best film he had lately seen was from Iran and that it was about a cow! Since he enjoyed piquing our curiosity without satisfying it, we suspected he was pulling our leg. Shortly thereafter, two Iranian films were shown at the Berlin Film Festival; so far as we know, neither was about a cow but we haven't to date seen either and the probability remains that one of them was. In any case, the reference to such a film was reassuring comment on the contemporary world—and we need all the reassurance we can get! Contrary to pessimistic forecasts, there is no overwhelming evidence that cinema, internationally, is in danger of becoming a totally standardized product, slavishly deriving its methods and subject matter from a common market of the lowest available denominator.

Of course there's always a level where that description fits, yet today, as never before, there is an opposition movement, unorganized but visible. Three principal circumstances—if we may simplify a complex tangle of influences—are responsible for the opposition. First of all, films are being made in countries where once there were none, or none worth trying to export. Because such countries cannot compete at the popular entertainment level, they must make films which impress by virtue of their authenticity alone. Secondly, the dire condition of the world has impelled many movie-makers to settle for nothing less

than bare candor in their interpretation of the human lot. These men, far and wide, are not necessarily confronting specific contemporary abuses, for they realize that their task is not directly to legislate human troubles but to express them. They are simply determined to be more honest than artists of their stamp have been heretofore; thus, the means they employ (their techniques, to speak drily) are better disciplined and their regard for human stuff is being more credibly portrayed. Thirdly, and this cannot be overestimated, even if it be qualified: the omnipresence of television in the world has created an insatiable demand for material. Audiences see too much, perhaps, for their powers of discrimination; but for those who can discriminate, the situation is rewarding. If TV networks are to transmit an unlimited amount of documentary or fictive chronicle into peoples' homes, they can scarcely confine their output to "situation comedies" and unrelieved blood-letting.

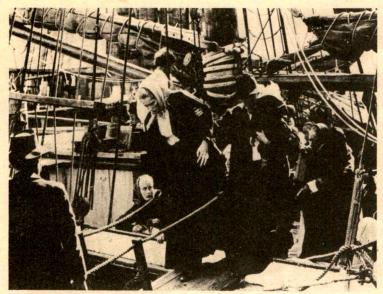
An Enterprising Diversity

The result, if these three factors, and no doubt many others, are kept in mind, has been an enterprising diversity of subject matter and a fascinating incursion of previously unfamiliar configurations. The great art historian, Elie Faure, once said that it was our differences that united us, since we approached each other in order to study the differences. Admittedly, we are not always charmed by the ways in which others differ from ourselves; yet it is certain that by our curiosity we are made cognizant of one another. Needless to add, we trust, that if movies are the source of our acquaintanceship, we are dependent on film-shapers who are not unduly falsifying the tenor of their histories.

The new awakening we have hailed is not consistently evident in countries which were previously in the vanguard of motion picture production. Compared with the situation 10 to 15 years ago, Japan and France are not now masters of the cinema; nor, without heavy qualification, is Sweden. Since Ozu died and Kurasawa retired, there is little heart in the Japanese film: principally a cold, naked eye and a deplorable inability of writers and directors to take the advice of a renowned Oriental philosopher who, in the 5th century B.C., said: "The only problem of style is to get the meaning across and then stop." The French, surprisingly, are suffering from reduced inspiration; a few piquant comedies, renovated from the mixture as before (César and Rosalie, The Old Maid); a Jacques Tati delight, sponsored by Swedish television; a few very suave but forgettable police dramas, to which a single unsparing inquest, Eduard Molinaro's Les Aveux Plus Doux (The Sweetest Confessions), is the rare exception.

As for Sweden, unless you still identify Swedish film with the Bergman film, now excruciatingly dessicated, you are left with Jan Troell as sole heir to the Swedish heritage. A precarious heritage. Troell is

indeed one of the greatest film-makers in the world today, but producers are far from convinced, judging by the reluctance with which they promote his films after paying for them. And while the Swedish public went in droves to Troell's double epic (The Emigrants and The New Land), which concerned Swedes in America, it snubbed his Zandy's



The Emigrants—making a new life in 19th century America.

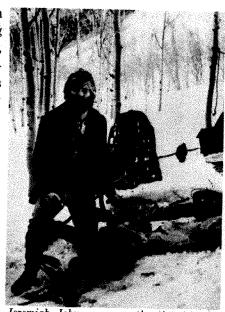
Bride, also made on location in the United States, evidently because it wasn't a repetition of the earlier masterwork and its view of the pioneer type was materially harsher. American critics have been more receptive to Troell than Americans at the box office.

The American Film Scene

An inspiriting improvement has taken place in the United States product. Jeremiah Johnson and Bad Company are absolutely authentic pictures of two phases of the Westward expansion: the first, that of the beaver-trade decades when white Americans took a long, free step backwards and became more Indian than the Indian; the second, during the Civil War period and its aftermath, when all manner of unworthy men breached the frontier and closed an heroic epoch. One moment in Bad Company, when four young outlaws empty their guns into a single jack-rabbit, is more eloquent than volumes of ecological lament. Yet neither of these films was given the respectful attention commanded by The Wild Bunch, McCabe and Mrs. Miller, Little Big Man and Billy the Kid, all "westerns" which are kitsch or worse; just as The Godfather, lengthy, loud and sadistic, ponderously underlined, was praised to excess, while John Huston's Fat City (produced in the same year) or The Friends of Eddie Coyle—films that made their clas-

sically compact statements with never a false note or an editorial dig in the ribs-were, if not ignored, inadequately honored for their dispassionate force and unpretentious veracity about life at the seamy edges of society.

Most disturbing of the new American films (our contention) was Five Easy Pieces, which explored a social type seldom grappled with since D.H. Lawrence and never presented in the movies with such comprehending lack of mercy (ratified by Jack Nicholson's astute performance): the man who loves no one and nothing, least of all himself; hates the monied classes, hates Jeremiah Johnson—an authentic vision of



the intelligentsia, despises his one phase of westward expansion.

own talent (musical), can't abide the workers, can't stand his dumb girl friend and can't tolerate anyone who can't tolerate her! At the dead end of this strangely moving film, he abandons his "doll" with his car, climbs into a lumber-hauling truck headed for the Northwest



Five Easy Pieces—exploring a type of alienated man.

forest, and the truck-driver delivers the last marvellously acute line: "You'd better put that jacket on; because I'll tell you something, brother—where we're going, it's cold!"

The Versatility of British Television

Great Britain is even more unanimously enlisted in a sweeping elimination from its films of everything merely exploitative or dishonest. At any rate, this is the conclusion we've come to by reference to the best of the English output of the last few years. Oddly enough, the films made for cinema and therefore aimed at distribution to a public other than the British-Spring and Port Wine, Kes, Family Life, The Hireling, The Raging Moon, among others—are strictly confined to the limits of a working-class environment or its perspective, providing no adequate clue to the unlimited capacities of the national talent. On British television, however, can be viewed the full range of the most versatile film-making country in the world, which proves, with no shadow of a doubt—given intelligence, wit and public conscience—the decided advantage for the artist in a pyramidal society as against those in a classless one. In the latter the film-maker addresses himself to a population which, as a whole, may well share his premises; but he is frustrated by limitations of social sympathy if he attempts to explore too often the nuances of another way of life, one contrary to the collective social temper. Since England is still a class-structured society (even if politely they don't dwell on it), the television writerdirector has at his disposal an abundant choice of subjects and an audience more diverse and readier to apprehend than any in the history of England. Fine social distinctions and mutual human interests are forever in the balance. Hence, British television programs are the most various to be found anywhere (documentary, dramatic, literary, historical, intimate, what you will), accessible to those who live in brick-chimney factory towns or to those who inhabit panelled mansions and preserve the sedate diction of Jane Austen; they are executed with a respect for the viewer's intelligence which is simply unknown elsewhere.

Nor should it need insisting upon that British actors and actresses are unmatched; the number of perfect performances you can see in a month without even catching the same player twice is staggering. Against all opinion of the English as insular, the BBC production of War and Peace was perhaps the paramount expression of the fabulous national empathy for a foreign life-style. To the last Russian man and the last Russian battle and the last Russian drawing-room, this production was breathtakingly generous in its scope and clairvoyant in its social and psychological shadings, far more compelling than Russia's film version of the same master novel. Another miracle of British intuition and craftmanship has recently been performed: Peter Watkins' unbelievably haunting three-and-a-half-hour TV biography of the



War and Peace-breathtaking in scope.

mordant Norwegian painter, Edvard Munch, sponsored by Norwegian and Swedish television, using as actors Norwegian non-professionals—hard to believe! This film is a multi-level experience of shaking veracity that simultaneously depicts the life-agony of an artist, reveals the sources of his agony (pictured with unbearably acute "leit-motifs" from his childhood) and immerses one, by a multitude of recreated details, in the delirious atmosphere of fin-de-siècle Northern Europe, when one world was dying and another struggling, inchoately, to be born.

Leonardo da Vinci on TV

Paradoxically, television, intended as an eyewash for Everyman, which it is in most areas of the globe, has been responsible, in a few countries, for bringing to the connoisseur experiences which the cinema does not supply and for which its producers could not pay had they the enterprise to attempt them. Transcending all the Italian theater movies of the past ten years (which, if vital in a noisy way, have become increasingly, grave or mad, politically partisan), was a princely treatment in seven TV episodes of the life of Leonardo da Vinci, supervised by Renato Castellani; before the Munch film mentioned above, the greatest interpretation of an artist since the Michelangelo film made by the Third Reich; and a perilous risk, financially, if you consider the average Italian's obsession with the present and his indifference to a history which he tends to relegate, with no little condescension, to sentimental tourists! Not merely the man, Leonardothe most nobly enigmatic mind known to the West-but the body of the age, was substantially resurrected: thanks to the documentation of a formidable research staff, to the undying presence of the very landscape in which the Renaissance flowered and, not least, to a host of actors chosen, regardless of nationality, for their resemblance to

a Medici or a Sforza or a cut-throat apprentice craftsman. (Phillipe Le Roy, a Frenchman, played Leonardo: one of the few deeply satisfying impersonations of a legend we've seen ever.) This was an intrinsically Italian achievement, reminding us that the career of Leonardo did not take place in a landless museum but in the malarial climate of the Po tributaries and the Appian aqueduct and of Machiavelli's politics.

Bulgaria and Hungary

According to a mammoth encyclopedia of film directors published by St. James' Press in 1975, there are no fewer than 29 directors listed under Bulgaria, a country not generally associated with cinema, much less with artful film-making. We happen to have seen seven or eight Bulgarian movies; of these we'd note two as especially memorable

(a decent ratio, surely): The Peach Thief of 1964 and The Goat Horn of 1971. Neither of these and few of the others radically differed in synopsis or point of view from scores produced in the West about individuals trapped within the cruelties that perennially assail mankind. Their flavor was Bulgarian, not socialistic. The Goat Horn is a revenge story taking place in a far-off mountain territory under the Turkish occupation of a century ago. Embodying the sardonic principleevil perpetuated by the attempt to undo it by retaliation in kind—it is thematically parallel with The The Goat Horn-evil perpetrated by retal-Bandits of Orgosolo, made by Vittorio iation in kind. de Seta in 1961 on Sardinia.



Similar distinctions (between the historical and the political) could be made if we had space to discuss at length Hungarian films—a richer yield. Suffice it to say that if Miklos Jancso, a favorite of film-society members in the West, has now taken his unique mannerism beyond the point of absurdity, and taken himself to Italy (where he has made a version of the Electra story), he has not left a vacuum in the Hungarian cinema. If nothing else, Hungary has two or three of the most proficient cinematographers to be found in any film-producing country, East or West.

But there is something, or rather, someone else, remaining. Istvaan Gaal is a Hungarian of another stamp, as rooted in earth and as warm in his affection for the contingent human interludes—the fears and

cruelties of children, the arrogance of the grown-up young, the authorities and resignations of maturity—as ever Jan Troell has been in his marvellous studies of rural life. Gaal's best film is The Falcons. apparently controversial wherever shown, although Gaal disdains any political category into which he might be inescapably boxed; for him, movie-making is simply "a form of poetry." Zoltan Huszarik could well advance the same claim. His Sindbad (1973), adapted from a pre-World War I Hungarian novel, but updated in its elliptical narrative technique, follows a doomed Don Juan on his last restless visit to the scenes of his destructive poetry. amours. Frame by frame, Sindbad is



The Falcons—moviemaking as a form of poetry.

a chromatic revelation; for sheer surface beauty and poetic animation, few films can be said to compete with it. Finally, Feren Kosac's Snowfall, released in 1975, is one of the masterpieces of splendid cinema, with fabulous camera setups unrivalled since Eisenstein. The film encompasses partisan warfare, magnificent mountain scenery, black Hungarian humor, stoical wisdom, and a general milieu comparable to the stories of Milovan Djilas.

The Intellectual in Polish Film

Polish movies are likewise shedding their political scales. The Resistance subject is pretty well exhausted; the force of that generation's involvement or recall is no longer a burning issue or bitter source of debate. The Peasants, a classic from pre-World War I years (whose author, Wladyslaw Reymont, was a Nobel Prize taker in 1925), was lately given a faithful adaptation on the television. By general agreement, the leading talent of contemporary subject films is Krystof Zanussi, in nearly all respects the opposite of the temperaments that put Poland briefly in the movie forefront 20 years ago. His scenarios, far from the violent exterminations of the anti-German cycle, invariably deal with a young intellectual coming of age in bewildered conflict with scientific premises difficult to reconcile with everyday emotional hungers; the unglamorous settings are those of urban blockhousing, college classrooms, and laboratories. If his earlier films for TV were as muted as the work of Japan's late Ozu or Italy's Ermanno Olmi, his full-length cinema piece, Illumination, had a feverish style of continuity, involving a high-speed montage of non-sequent images—microscope enlargements of biological process and errant deviations. The principal character, a young medical student, is almost confounded as he faces the disparity between this evidence of potential disorder in nature and the heedless days he otherwise passes with his young bride, his friends, and the routine of medical training. Self-evidently, the film broaches problems which neither socialism nor any other ism can satisfactorily solve; it is akin to that fine American film about the growing pains of an uncouth law student, The Paper Chase, or to Satyajit Ray's Bengali movie, The Adversary, relating the bafflement of a young Indian who can't find his way in the transitional mores of an Anglo-Indian environment. The Polish-ness of Zanussi's work is underscored by his peculiarly intense exploration of death-and-disease images, something quite foreign to the Bengalese or American examples we have cited.

We must add our praise for Jerzy Hoffman's The Deluge, a Polish historical spectacle, the sort of film that snobs dismiss because it's "national romanticism" or is improbably plotted. True, the hero was inconceivably unkillable and the love story was no end unreal in a way they were when Sienkeiwicz wrote such novels. But few films can match The Deluge for period sense (17th century Poland); the reality of war and poverty and weather; the magnificent horseflesh; the blood and amputations and casual cruelty; and miles of melancholy blizzard-ravaged plains and forests. The film ran five hours and 14 minutes and we would not have sacrificed a foot of it.

One point we hope to have made here: the best film directors in East Europe appear to have no inclination to treat the motion picture



The Deluge—the reality of war, the magnificent horseflesh.

as a political weapon. They tell stories—unforensic, fundamental—inspired not by the obligations of an ideological blueprint but from their personal and local experience, from the well of their past or from yesterday's puddle. There are no new subjects; there are multiple versions of the human plight in any locality where "Thought's the slave of life, and life time's fool." To be sure, creativity is never guaranteed. Neither the absence of political restraint nor the presence of a grand budget will infallibly produce artistic competence. Notably and to us mysteriously, Yugoslavia, which has published some of the best poetry and fiction of our time, has as few seeable films to its credit as Holland or Switzerland. If race and country establish the setting and the manners, and history the particulars for drama, these conditions must intersect and be given shape by an individual artist.

An Indian Master

Satyajit Ray's Company Limited is a startling instance of how, within a contracting world, a parallel problem will invoke parallel techniques for expressing it, yet be virtually unrecognizable as a parallel; not alone the personalities but the volatile essence of the foreign vehicle will deter one from instantly recognizing a scheme of things everywhere the same although everywhere variable. If it were possible to synopsize Ray's film with no reference to its taking place in Calcutta, few Western experts would fail to identify it as having been made by Antonioni in the early 1960's: the subtle corruption of an ambitious sales agent by the board-of-directors world to which he aspires, and the crucial betrayal demanded of him to attain that en-



Company Limited-penetrating scrutiny of the Anglo-Indian business world.

viable position—a betrayal all the easier to perpetrate since it is tacitly approved, inconspicuously achieved, suavely rationalized and quickly forgotten. Rhyming strategically with Antonioni, there is a manic emphasis on decor: the antiseptic "international" offices, board rooms and apartments; an agreeable opulence in which neither a piece of furniture nor a utensil nor a picture insinuates a Bengali interior. Ray's camera lingers over and transfixes the pattern of a textile, the bevelled surface of a telephone, the mold of a liqueur glass, an electric fan. Analagous with the vestigial "plot" of an Antonioni triangle, Aguirre, Scourge of God-a spectacular epa discerning woman is sole witness of the extent to which the ambitious



isode of buccaneering.

Chatterjee has lost himself without confessing it.

Yet these resemblances are merely exo-skeletal. By contrast with Company Limited, any of the Antonioni films of which it may be reminiscent seem, at this distance, crudely schematized. Ray's Chatterjee is not wholly a scoundrel (if his venality increases, you may be sure that he'll conserve a vein of gentility). The woman in question here is Chatterjee's sister-in-law, and while they are visibly attracted to one another, the erotic element never quite surfaces; furthermore, she is not played antithetically against Chatterjee's less prescient wife, to whom he remains comfortably devoted. Of all the film directors who came into special prominence during the same era (e.g. Bergman, Bunuel, Cayette, Antonioni, Fellini, Visconti), Ray seems to us to have maintained and refreshed his insights with the greatest delicacy and assurance. To his command of a native world, exclusively Bengali-rural, he has recently added a no less penetrating scrutiny of the Anglo-Indian entente: the smiling servilities, the ambiguous adaptations, the paradoxical facility for engineering a business deal and casually quoting Joseph Conrad.

For some of the above reasons, then, we urge you not to give up hope of discovering an out-of-the-way film (geographically and otherwise) which may add to the sum of your exotic, even instructive, experiences in cinema. While recognizing that your taste may not be identical with ours, we want to recommend a German film of Werner Herzog, Aguirre, Scourge of God (in which a panoplied expedition of 16th century Spanish conquistadors fatally descends a tributary of



A Man Called Horse—ritual initiation into warriorhood.

the Amazon): a spectacular episode from the history of buccaneering. How it was done without a loss of life or limb enthralls our curiosity! In the same direction, more or less, we have no hesitation proclaiming a Brazilian film of Nelson Pereira dos Santos, How Good You Taste, My Frenchman, an unsentimental depiction of the "noble savage" that serves the anti-Rosseau movement! You musn't prejudge it by the suggested levity of its title; you might describe it as a companion piece to Aguirre, since it is also a misadventure of the Conquest, but the raw material (if we dare approach, by way of pun, the appalling justification for the title) is closer to that of the North American film. A Man Called Horse, in which a captured Englishman undergoes the

agonizing ritual initiation into Sioux warriorhood.

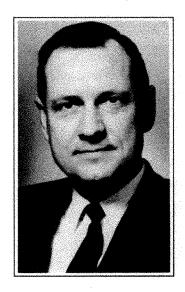
At the moment (which may not be yours, owing to distribution inequities) we are frankly looking forward to another Werner Herzog fantasy, staged on a Caribbean island, called Even Dwarfs Started Small; to a Czechoslovak epic (far from the playful, contemporary world of Loves of a Blonde) set in the Middle Ages—Marketa Lazarova, four hours long and from what we've heard all blood and smoke; to a Georgian (USSR) production, Niko Pirosmanni, recounting the lifestory of a 19th century "primitive" painter; to a film of Peter Smith, A Private Enterprise, sponsored by British Film Institute funds, which would appear to invite comparison with the world of Satyajit Ray: the central character is an Indian trying to negotiate the commercial midland of Great Britain. And of course we are still on the alert for that Iranian film "about a cow."

DEVELOPMENT FROM BELOW

By James P. Grant

The experience of the past two decades has taught us, writes the author, that the economic health of developing countries cannot be judged by simple statistics of "growth." If productivity enriches only the few at the top, the nation suffers in the long run. Dr. Grant urges that developing countries approach their problems primarily "from below," emphasizing small-scale business and farming, labor-intensive machinery, and government programs that spread the benefits of productivity to all classes.

James P. Grant is president of the Overseas Development Council, an independent research organization seeking to increase American understanding of the problems faced by developing nations. Earlier he served as an administrator for the U.S. Agency for International Development (A.I.D.) and director of its programs in Turkey and Ceylon. His article is abridged from *Foreign Policy* magazine.



major rethinking of development concepts is taking place, compelled by a single fact: the unparalleled economic growth rates achieved by most developing countries during the 1960's had little or no effect on most of the world's people, who continue to live in desperate poverty.

This realization has stimulated an increasingly insistent theme among leaders as diverse as Indira Gandhi of India, Luis Echeverria of Mexico, Ferdinand Marcos of the Philippines, and World Bank President Robert McNamara: that we need development policies which benefit all strata of the population and not just a favored minority. Senator Hubert Humphrey has spoken of

...the veritable intellectual revolt among scholars of development who are turning against the long-held view that growth alone is the answer that will trickle benefits down to the poorest majority. [They] start from the proposition that the poorest majority must share in the work of building a nation and must share more equitably in the fruits of development at the outset... Greater equity and greater participation, instead of taking a toll on growth, support and reinforce it.

The experience of several less-developed countries offers encouraging evidence that an effective mixture of domestic and international policies can create new jobs, increase social services, reduce income disparities, and check population growth—without deterring, and at times

^{* 1973} by National Affairs. Inc.

even accelerating, over-all economic growth. We are learning that if small rural and urban producers and under-employed workers are given access to education, credit, technology, and health services, then they too can become highly productive, with a high capability for savings and effective investment.

GNP and Human Welfare

During the 1960's, the developing countries achieved a 5.5 percent average annual increase in gross national product (GNP)—a rate unequaled by nations of the developed world at any time in their earlier history. But in many of these countries, unemployment levels nevertheless continue to increase; the income gap between the poorest sector of the population and those relatively well off is actually widening; and urban squatter settlements are mushrooming because of massive emigration from the countryside. In many areas, these problems become more unmanageable every day because population growth continues unrestrained.

The experience of most developing countries over the past decade indicates that a rising GNP growth rate alone is no guarantee against worsening poverty. Mexico, for example, has been very successful by traditional standards: its GNP has risen by 6 or 7 percent annually for the past 15 years. Yet, at the same time, unemployment in Mexico has been increasing, and the income disparity between the rich and the poor has been widening. This is not only because of Mexico's very rapid population growth, but also because government policies have bypassed the small, labor-intensive producers throughout Mexico and encouraged production primarily through large farms and urban-based factories.

Nor are these trends representative of Mexico's experience alone. A similar serious worsening of income distribution has occurred in many other countries, including the Philippines, Brazil, Pakistan, and Ghana. Socialist states like Yugoslavia and China have shared the problems of underemployment and unemployment which trouble most developing countries. Cuba, like Sri Lanka and Uruguay, has introduced massive welfare programs for the poor, but like them has found itself in great financial difficulty and has lost much of its capacity for growth.

Using Idle Labor for Growth

Many developing countries are beginning to learn that to measure development by GNP increases alone is to forget that, after all, the goal is human progress. Development planners need to be concerned as much with how the GNP increases as with the rate by which it increases.

As a first step, most developing countries need to assign more realistic values to capital, labor, and foreign exchange. These countries are

generally labor-rich and capital-poor, yet many have adopted policies which encourage wasteful use of scarce capital instead of making effective use of idle labor. Thus, foreign exchange often has been undervalued, with the result that labor-displacing equipment has been imported at artificially low prices.

Many developing countries also have largely ignored possibilities for increasing agricultural production by securing the participation of small farmers and of small-scale industry, while they have favored the development of large factories, roads, ports, and major urban centers. This is both inefficient and inequitable for developing countries, since the majority of their people live in villages and smaller towns—and will do so for at least the next generation. Yet improvement in rural and small town productivity and living conditions could make more food available; slow the flow of unemployed people to the cities; provide a mass market for labor-intensive products such as hand tools, textiles, and shoes, by increasing the purchasing power of the poor majority; and provide large numbers of non-farm jobs in small town labor-intensive industries.

Fortunately, there is growing evidence that policies which are carefully designed to raise the income of the poorest sector of the population, by increasing their ability to participate in the development process, can actually accelerate, not hinder, economic growth. These policies require more than a greater use of plentiful labor as against scarce equipment. They also involve providing incentives to encourage savings; establishing institutions which give small farmers and entrepreneurs ready access to capital and technology and ensuring the availability of rudimentary but meaningful education and health services to virtually all their citizens. Through such policies, some countries have made social justice a major ally of growth by putting idle labor resources to effective work and making more efficient use of capital and foreign exchange.

The Role of Savings

The role of savings provides a good example. It has long been a premise of most economists that the rate at which poor people save is very low because they spend any additional income on consumer goods and services. Hence, in most low-income countries, government policies designed to increase savings and investment—the necessary preconditions for economic progress—have generally been aimed at the higher income groups and larger firms.

But we are now learning a different lesson from the savings performance of urban workers and small farmers in a range of developed and developing countries. The savings rates and productivity of the poor on any increased income can be very high if they own or rent

their own economic equipment and if governments encourage their participation in development with economic incentives.

In Singapore, for example, an imaginative and popular withholding scheme, requiring both the worker and the employer to contribute an amount equal to 15 percent of the worker's salary, finances the down payment for the worker's flat and subsequent mortgage installments. The benefits of these savings are not deferred until some remote retirement date. Through largely self-financing devices such as this, a majority of Singapore's slum-dwellers have dramatically improved their living conditions in the past 10 years. Meanwhile, in Japan, Egypt, South Korea, Taiwan, and Yugoslavia, small farmers—who have achieved extraordinarily high per-acre yields on farms averaging two to three acres with the help of credit and technical advice from effective farmers' associations—have shown that they can provide much of the savings for development.

Small Farms and Productivity

There is a similar beneficial impact on per-acre productivity and employment where the small farmer has effective access to credit, marketing facilities, technology, education, and health facilities. We have long been told that the small farm is "inefficient" and "less productive" per acre than large farms. This need not be true. In countries like Egypt, South Korea, and Taiwan, and in those areas of Sri Lanka and India where the small farmers also have access to credit and other facilities which are available in most countries only to large farmers, small producers are demonstrating a very high capacity to employ technology and labor on scarce land as complements rather than substitutes for each other. We also are learning that, when other factors are equal, small farms are more productive per acre than big farms because the small farmer devotes more hours and care in coaxing maximum production from his limited acreage—through careful land leveling, weeding, spraying, etc.—than is economically feasible for the large producer. Thus, even in India, average yields on farms of fewer than five acres are nearly 50 percent greater than on farms of more than 50 acres. In Taiwan, where small farmers have good access to needed inputs, farms with fewer than two and a half acres have far higher per-acre yields than do those with more than five acres.

Contrary to popular thinking, small-farm, labor-intensive agriculture can benefit greatly from mechanization by using machines that increase productivity and supplement rather than replace human effort—e.g., seed drills, rotary tillers, and small irrigation pumps. Moreover, in large areas of the tropical and semi-tropical world, double and triple cropping becomes technically possible with the right kind of small farm mechanization.

Traditional or slightly modernized agriculture is now a part-time job. According to a number of sample studies, farmers in low-productivity agricultural systems work 1,000 hours a year or less (as compared with a normal work year in the United States of about 2,000 hours). However, in Egypt and the northeast Asian countries cited earlier, farmers have been increasing their work load in recent years to between 2,000 and 3,000 hours per year.

Access to Credit and Machines

We are only now beginning to recognize that the crucial difference between countries in productivity and labor-intensiveness is not primarily a question of their cultural attitudes toward work, but rather depends on whether or not farmers have access to the needed support systems. In the few countries and regions where small farmers do have this access, farming is a full-time job. Perhaps the most striking demonstration of this is to be found in Taiwan. Between 1911 and 1965, total agricultural production quadrupled in Taiwan, despite the fact that population pressure halved the average farm size to two and a half acres. The increase was accomplished through the use of irrigation, new seed varieties, small-scale machinery and diversified patterns of crops (including vegetables, fruits, and livestock). During this 54year period the total amount of agricultural work doubled. The number of agricultural workers rose 50 percent and the number of days worked by each person increased one-third. Agricultural output per worker also rose by 250 percent during this period, so that the productivity and incomes of the growing labor force improved significantly.

The average small farmer in Northeast Asia—Taiwan, Korea, Japan—has become far more productive per acre than his counterpart in the Indian or Pakistani Punjab, primarily because the entire rural support system—credit and marketing institutions, agricultural extension, farm technology, and broadly available health and educational facilities—is designed to serve the small farmer. The Punjab systems, by contrast, are geared to providing effective support for larger farms. As a result, in these South Asian countries, most smaller farmers, frequently illiterate and in poor health, do not have adequate access to credit or appropriate technology and are far less productive than they could be. Their small farms are described as "inefficient," but the real fault lies with the system rather than with the farmer or the size of his farm. This view was confirmed during the 1960's, when effective support systems were made available to the small farmers of central Sri Lanka. Both yields per acre and labor-intensiveness rose just as they had in Northeast Asia.

In some industries (e.g., steel and fertilizer) the most modern technology used in the West may also be the most efficient for poor countries, regardless of differences in the structure of relative resource prices.

A modern steel mill produces steel of higher quality much more cheaply than does a small backyard furnace. Thus, during the Great Leap Forward, China decided to create employment by use of small-scale technologies in the steel industry, and found they were a very costly drain on resources.

Appropriate Technology for Industry

However, there are many industries—such as those supplying non-durable consumer goods, or engaged in processing, construction, and agriculture—which can choose from a range of efficient technologies. If the price of capital is high relative to that of labor, entrepreneurs use more labor and less machinery to produce an equally good product at less cost than with more advanced technology. Ditch-digging is a simple example. Let us assume that a bulldozer can do the same work as 120 men with shovels. If, under the typical price structure, a bulldozer and driver can be rented for \$100 per day, whereas the wages for a man with shovel are \$1 per day, it would obviously pay a contractor to use a bulldozer. If, on the other hand, the price of capital were to be raised 25 percent, then it would cost the contractor \$125 per day to rent the bulldozer, so that it becomes more profitable for him to employ the 120 men.

In practice, most decisions on industrial technology are much more complicated than this simplified illustration, but similar considerations apply. For example, there is the rubber products industry in Asia. Rubber products produced in Korea and Taiwan are as good and as profitable as those made in India, and they provide nearly twice as much employment for a given amount of investment in the industry, because the machinery used is more adaptable and more labor-intensive.

But where are the "appropriate" technologies to come from? In some cases, Western machinery can be adapted, as has been managed so effectively in Northeast Asia. Alternatively, it may be necessary to experiment with entirely new technologies, developed especially for the conditions of the low-income countries. This is being tried by the Chinese in many fields, and by the International Rice Research Institute in the Philippines in rice cultivation and processing. It should be emphasized, however, that very little research is being done in this field, and that only a few institutions are devoting their efforts to the discovery of appropriate technologies for particular industries.

Helping the Rural Sector

Many poor countries particularly need to find means of increasing output in the rural sector and of making more effective use of their small producers and large pools of underemployed labor. Though agriculture provides most of the employment and income for people in rural areas of developing countries, there can be many employment

opportunities in market towns and small cities, particularly if there is a dynamic agricultural sector. Modern agriculture requires much higher inputs of seeds, tools, fertilizer, and credits. The provision and distribution of these inputs will create local jobs. The increased flow of agricultural products must be processed, transported, and marketed: these activities also create more jobs. And finally, the increased incomes that farmers receive—particularly the smaller farmers—are spent primarily on goods and services which can be produced in small firms using labor-intensive production techniques and fewer imported materials and parts.

Much of the activity associated with agriculture will be located in smaller market towns, particularly if water, electricity, and credit facilities are available. In the Pakistani Punjab, for example, the town of Dasca has grown into a center for the manufacture of simple diesel engines for tube wells and grain mills. There are now more than 100 small factories producing diesel engines, mostly from local materials. These factories employ more than 1,000 workers, all of whom are trained in local factories. In this way medium- and small-scale industries can form the nuclei of a network of rural growth centers which also help to increase the level of employment and the demand for food. The initial emphasis given to rural development in Taiwan explains in part why so much of its industry is in the countryside. In the early 1960's Taiwan had only 34 percent of its industrial employment in the capital and regional cities where 22 percent of its total population lived. Under roughly comparable circumstances, Colombia had 75 percent of its industrial employment in its principal cities.

Need for Small Businesses

Unfortunately, the situation of small-scale industry in most developing countries is similar to that of agriculture. Large-scale industry receives almost all the support. A tenet of both classical and socialist economics is that small business is less efficient than large industry and will gradually disappear. However, studies done in India, Pakistan, Indonesia, Taiwan, Egypt, Chile, Mexico, Colombia, Ghana, and Ethiopia show that small business units are often more productive than large ones, at least in the early stages of development. For example, a Taiwan study comparing small industries with an investment of under \$35,000 with those having an investment of over \$25,000,000 showed that each additional dollar invested in the smaller plants created almost twice as much output as an additional investment in the larger, and that labor's share of income in small plants was double that in the large ones.

Creating favorable conditions for small entrepreneurs in market towns and small cities can also bring into the national economy hundreds of thousands of new businessmen who, like small farmers, are

now excluded from participating in development. Small industries can economize on scarce managerial talent because management is simple and direct. At the same time, they provide an opportunity for large numbers of businessmen to acquire what the countries need most—experience and skill in management at all levels of the economy and in all classes of society.

Public Works and Social Services

Some developing countries, most notably Brazil, Korea, India, Bangladesh, Indonesia, Morocco, and Tunisia, have tried to absorb some of their unemployed in public works programs. If the labor in these programs is used to construct canals, dams, and houses, it can help create an infrastructure that is essential to rural regeneration, which in turn can provide longer-term employment opportunities in intensified agriculture and related industries. Such projects are likely to be far more profitable if coupled with increasing agricultural productivity. The returns on investment in farm-to-market roads and in small-scale irrigation projects are very high when they enable farmers to use new agricultural technologies. At the same time, the wages paid to the laborers on these projects are largely spent on food and other essentials, further stimulating demand for these products, and employment.

Above all, there can be no long-term solution to the problems of the developing countries unless population growth is brought under control. Conversely, it may not be possible to halt rapid population growth in most developing countries without major improvement in the well-being of the majority of their people. We now know that when better medical care, housing, jobs, and the possibility of a better life become available, old attitudes favoring large families begin to change rapidly. Encouraging evidence from societies as different as China, Barbados, Sri Lanka, Singapore, Uruguay, the Punjab, Taiwan, and South Korea indicates that birth rates have been declining sharply in some areas even before the introduction of large-scale family planning programs—and at much lower income levels than in the West. Preliminary examination of these cases reveals a common factor. In each of these countries, the population as a whole has shared in the economic and social benefits of progress to a far greater degree than in most developing countries.

Thus recent evidence suggests that more equitable growth is the necessary ally of family planning programs if population stabilization is to be achieved. Population policies alone are not enough. There is an inverse correlation between per capita GNP and birth rates: the higher the income, the lower the birth rates. There are exceptions, but these can be explained by an extremely high disparity of incomes and a large population living in extreme poverty.

Development Means Reform

In many countries, adopting the policies outlined here requires major changes in the way in which power is exercised. Such changes will not be easy. Established interests in any country naturally resist reforms aimed at removing much of their power. Effective land reform programs require a shift in power from landlord to tenant. Effective low-cost health systems that reach an entire population require changes in doctors' professional attitudes and standards to allow widespread use of less costly, but also less qualified, paramedics. Unions must be more modest in their demands for wage increases, so as not to encourage the use of labor-saving machinery. Similarly, in both low-income and high-income countries, inefficient industries must be phased out for the sake of the long-run benefits of freer trade.

How can these needed changes be brought about? Some—such as more realistic interest and foreign exchange rates, health systems designed to reach the majority and not just the few, and encouragement of credit mechanisms for small producers—are relatively easy to introduce once a determined government understands the issues. This is the great importance of the "veritable intellectual revolt" described by Senator Humphrey.

A sense of crisis is the determining factor in creating a climate for change that forces governments to act: the political costs of inaction must appear to exceed the cost of action. Thus the serious food shortages in South Asia during the mid-1960's partially explain the policy changes then made in India and Pakistan to make possible a Green Revolution. A lack of a sense of crisis, on the other hand, helps explain why these changes have yet to be made in most Latin American countries.

What Role for "Outsiders"?

The initiative for change and development rests with the developing countries themselves. Structural reform and appropriate local systems and technologies depend on internal decisions. Yet in many cases outsiders can play useful roles.

- They can help to identify a world problem for political leaders and the public. Recently, development scholars and leaders have drawn attention to the inadequacies of many current development strategies. Their professional credentials also helped make possible in many countries more open discussion of the problems and possible remedies, without such talk being branded as irresponsible radicalism.
- Outsiders can aid the search for new techniques, as was done, for example, by the Rockefeller and Ford Foundations in developing the new high-yielding seeds, and by the multidisciplinary teams on employment organized by the International Labor Office and sent to such countries as Colombia and Sri Lanka.

- When a developing country is ready to act, developed countries can provide support. The recent restructuring of the American bilateral development assistance program, and of the World Bank, should significantly increase the capabilities of both programs in these regards.
- Finally, there is a need for a major increase in the general flow of resources from rich countries to poor, to help the latter achieve higher growth rates. Although it is now clear that economic growth alone will not solve the problems of the low-income countries, neither will these problems be readily solved without achieving higher economic growth rates. Quite simply, higher rates of growth make it easier for a determined government to carry out necessary reforms without major violence or extreme authoritarianism, and for these reforms to succeed when introduced. And the achievement of higher rates of growth requires more machinery, raw materials, and technical know-how—all of which in turn require foreign exchange. Thus it is no accident that most of the development "successes" cited earlier took place in countries that had broad access to foreign aid, trade, and investment.

Many developing countries can acquire additional foreign exchange by adopting more outward-looking economic policies. However, the international economic environment frequently is no more congenial to their development than is the national environment of many countries to the poor majority of their people. Policies of developed countries and the structure of international institutions frequently discriminate, often inadvertently, against the poor countries in both trade and finance. There must be major changes in the way rich countries relate to the poor countries if there is to be anything like the needed increase in the transfer of resources in the 1970's.

We have seen that income distribution, welfare, and even population policies cannot readily be divorced from growth policies. Indeed, when national production is organized so that it leaves a fairly large number of people unemployed or otherwise disadvantaged, it becomes very difficult to redistribute income to those who are not participating effectively in the production process.

Reforms within developing countries—as well as changes in the trade, investment, and aid patterns between rich and poor nations—have become more than requirements of justice. They are becoming fundamental to the political survival of nations and of the international economic system. Greater equality of opportunity to participate, rather than more aid of the welfare variety, is the most urgent need of the poor within countries—and of the low-income states within the community of nations.

IS SCIENCE USEFUL?

By Isaac Asimov

Scientists have through the centuries faced the layman's question: What is the practical use of their theories and discoveries? Professor Asimov here draws on the fascinating history of science to support the enormous, if not always immediate, usefulness of "pure science." His article is reprinted from The Greatest Adventure: Basic Research That Shapes Our Lives, edited by Eugene H. Kone and Helene J. Jordan.

Isaac Asimov is professor of biochemistry at the Boston University Medical School and a prolific author of both formal science writing and science fiction. He has published more than a hundred volumes, including The New Intelligent Man's Guide to Science, The Genetic Code and Of Time, Space and Other Things.



It is the fate of the scientist to face the constant demand that he show his learning to have some "practical use." Yet it may not be of any interest to him to have such a "practical use" exist; he may feel that the delight of learning, of understanding, of probing the universe, is its own reward. In that case, he might even allow himself the indulgence of contempt for anyone who asks more.

There is a famous story of a student who (around 370 B.C.) asked the Greek philosopher Plato: of what use were the elaborate and abstract theorems he was being taught? Plato at once ordered a slave to give the student a small coin that he might not think he had gained knowledge for nothing, then had him dismissed from the school.

The student need not have asked and Plato need not have scorned. Who would today doubt that mathematics has its uses? Mathematical theorems, which seem unbearably refined and remote from anything a sensible man can have any interest in, turn out to be absolutely necessary to such highly essential parts of our modern life as, for instance, the telephone network that knits the world together.

This story of Plato, famous for two thousand years, has not made matters plainer to most people. Unless the application of a new discovery is clear and present, most are dubious of its value. A story about the English scientist Michael Faraday illustrates the point.

In his time, Faraday was an enormously popular lecturer, as well as a physicist and chemist of the first rank. In one of his lectures in the 1840's, he illustrated the peculiar behavior of a magnet in connection

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with a spiral coil of wire which was connected to a galvanometer that would record the presence of an electric current. There was no current in the wire to begin with, but when the magnet was thrust into the hollow center of the spiral coil, the needle of the galvanometer moved to one side of the scale, showing that a current was flowing. When the magnet was withdrawn from the coil, the needle flipped in the other direction, showing that the current was now flowing the other way. When the magnet was held motionless in any position within the coil, there was no current at all, and the needle was motionless.

At the conclusion of the lecture, one member of the audience approached Faraday and said, "Mr. Faraday, the behavior of the magnet and the coil of wire was interesting, but of what possible use can it be?" Faraday answered politely, "Sir, of what use is a newborn baby?"

It was precisely the phenomenon whose use was questioned so peremptorily by one of the audience that Faraday employed to develop the electric generator, which, for the first time, made it possible to produce electricity cheaply and in quantity. That, in turn, made it possible to build the electrified technology that surrounds us today and without which life, in the modern sense, is inconceivable. Faraday's demonstration was a newborn baby that grew into a giant.

Edison and "Pure" Science

Even the shrewdest of men cannot always judge what is useful and what is not. There never was a man so ingeniously practical in judging the useful as Thomas Alva Edison, surely the greatest inventor who ever lived, and we can take him as our example.

In 1868, he patented his first invention. It was a device to record votes mechanically. By using it, congressmen could press a button and all their votes would be recorded and totaled instantly. There was no question that the invention worked; it remained only to sell it. A congressman whom Edison consulted, however, told him, with mingled amusement and horror, that there wasn't a chance of the invention being accepted, however unfailingly it might work. A slow vote, it seemed, was sometimes a political necessity. Some congressmen might have their opinions changed in the course of a slow vote, whereas a quick vote might, in a moment of emotion, commit the Congress to something undesirable.

Edison, chagrined, learned his lesson. After that, he decided never to invent anything unless he was sure it would be needed and wanted and not merely because it worked.

He stuck to that. Before he died, he had obtained nearly 1,300 patents —300 of them over a four-year stretch, or one every five days, on the average. Always he was guided by his notion of the useful and the practical. On October 21, 1879, he produced the first practical electric light, perhaps the most astonishing of all his inventions. (We need only

sit by candlelight for a while during a power breakdown to discover how much we accept and take for granted the electric light.)

In succeeding years, Edison labored to improve the electric light and, mainly, to find ways of making the glowing filament last longer before breaking. As was usual with him, he tried everything he could think of. One of his hit-or-miss efforts was to seal a metal wire into the evacuated electric light bulb, near the filament but not touching it. The two were separated by a small gap of vacuum.

Edison then turned on the electric current to see if the presence of a metal wire would somehow preserve the life of the glowing filament. It didn't, and he abandoned the approach. However, he could not help noticing that an electric current seemed to flow from the filament to the wire across that vacuum gap.

Nothing in Edison's vast practical knowledge of electricity explained that phenomenon, and all Edison could do was to observe it, write it up in his notebooks, and, in 1884 (being Edison), patent it. The phenomenon was called the "Edison effect," and it was the inventor's only discovery in pure science. Edison could see no use for it. He therefore pursued the matter no further and let it go, while he continued the chase for what he considered the useful and practical.

The "Useless" Path to Modern Electronics

In the 1880's and 1890's, however, scientists who pursued "useless" knowledge for its own sake discovered that subatomic particles (eventually called "electrons") existed, and that electric current was accompanied by a flow of electrons. The Edison effect was the result of the ability of electrons, under certain conditions, to travel unimpeded through a vacuum.

In 1904, the English electrical engineer John Ambrose Fleming (who had worked in Edison's London office in the 1880's in connection with the developing electric-light industry) made use of the Edison effect and of the new understanding that the electron theory had brought. He devised an evacuated glass bulb with a filament and wire which would let current pass through in one direction but not in the other. The result was a "current rectifier."

In 1906, the American inventor Lee De Forest made a further elaboration of Fleming's device, introducing a metal plate that enabled it to amplify electric current as well as to rectify it. The result is called a "radio tube," because only such a device could handle an electric current with sufficient rapidity and delicacy to make the radio a practical instrument for receiving and transmitting sound carried by the fluctuating amplitude of radio waves. In fact, the radio tube made all of our modern electronic equipment possible—including television.

The Edison effect, then, which the practical Edison shrugged off as interesting but useless, turned out to have more astonishing results

than any of his practical devices. Actually, the problem isn't to show that pure science can be useful. It is a much more difficult problem to find some branch of science that isn't useful. Between 1900 and 1930, for instance, theoretical physics underwent a revolution. The theory of relativity and the development of quantum mechanics led to a new and more subtle understanding of the basic laws of the universe and of the behavior of the inner components of the atom.

None of it seemed to have the slightest use for mankind, and the scientists involved—a brilliant group of young men—apparently had found an ivory tower for themselves that nothing could disturb. Those who survived into later decades looked back on that happy time of abstraction and impracticality as a Garden of Eden out of which they had been evicted. For out of that abstract work there unexpectedly came the nuclear bomb, and a world that now lives in terror of a possible war that could destroy mankind in a day.

But it did not bring only terror. Out of that research also came radio-isotopes, which have made it possible to probe the workings of living tissue with a delicacy otherwise quite impossible, and whose findings have revolutionized medicine in a thousand ways. There are also nuclear power stations, which may offer mankind the brightest hope of ample energy during all his future existence on earth.

There is nothing, it turns out, that is more practical, more downright important to the average man, whether for good or for evil, than the ivory-tower researches of the young men of the early 20th century who could see no use in what they were doing and were glad of it, for they wanted only to revel in knowledge for its own sake.

Unpredictable Consequences

The point is that we cannot foresee the consequences in detail. Plato, in demonstrating the theorems of geometry, did not envisage a computerized society. Faraday knew that his magnet-induced electric current was a newborn baby, but he surely did not foresee our electrified technology. Edison certainly didn't foresee a television set when he puzzled over the electric current that leaped the vacuum, and Einstein, when he worked out the equation $e = mc^2$ from purely theoretical considerations in 1905, did not sense the atomic bomb's mushroom cloud as he did so.

We can only make the general rule that, through all of history, an increased understanding of the universe, however out-of-the-way a particular bit of new knowledge may seem, however ethereal, however useless, has always ended in some practical application (even if sometimes only indirectly).

The application cannot be predicted, but we can be sure that it will have both its beneficial and its uncomfortable aspects. The discovery of the germ theory of disease by Louis Pasteur in the 1860's was the

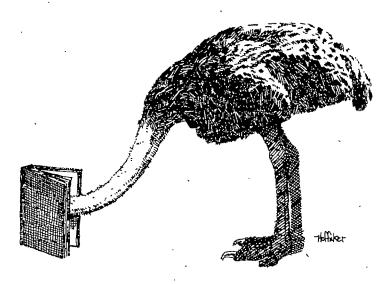
greatest single advance ever made in medicine and led to the saving of countless millions of lives. Who can quarrel with that? Yet it also has led, in great measure, to the dangerous population explosion of today.

It remains for the wisdom of mankind to make the decisions by which advancing knowledge will be used well, but all the wisdom of mankind will never improve the material lot of man unless advancing knowledge presents it with the matters over which it can make those decisions. And when, despite the most careful decisions, there come dangerous side-effects of the new knowledge, only still further advances in knowledge will offer hope for correction.

Now we stand in the closing decades of the 20th century, with science advancing as never before in all sorts of odd, and sometimes apparently useless, ways. We've discovered quasars and pulsars in the distant heavens. Of what use are they to the average man? Astronauts have brought back rocks from the moon at great expense. So what? Scientists discover new compounds, develop new theories, work out new mathematical complexities. What for? What's in it for you?

No one knows what's in it for you right now, any more than Plato knew in his time, or Faraday knew, or Edison knew, or Einstein knew. But you will know if you live long enough; and if not, your children or grandchildren will know. And they will smile at those who say, "But what is the use of sending rockets into space?" just as we now smile at the person who asked Faraday the use of his demonstration.

In fact, unless we continue with science and gather knowledge, whether or not it seems useful on the spot, we will be buried under our problems and find no way out. Today's science is tomorrow's solution—and tomorrow's problem, too.



TECHNOLOGY IN EDUCATION

By Eric Ashby



A noted educator argues that such new technologies as programmed learning and computers are useful tools in contemporary mass education, although hardly the panaceas some believe them to be. He adds that scientific education can be dangerous unless balanced by humanistic studies that emphasize the ethical and social consequences of technological innovations.

Eric Ashby is master of Clare College at Cambridge University, and chancellor of Queen's University in Belfast. He has written widely on both British and American higher education. His books include Technology and the Academics, Masters and Scholars and, most recently, Adapting Universities to a Technological Society, from which the following article has been excerpted.

In the long history of education there have been four intellectual revolutions. At first (and in some communities this is still true), education was a responsibility of the extended family. Through fables, stories, and initiation ceremonies children were taught the tribal heritage and trained to take their place in society. Then, in one country after another and for a variety of reasons, education became professionalized. Children were assembled together and taught by experts. The prime purpose in most instances was to give religious instruction, whether in the synagogues of ancient Palestine, the schools of the Muslim world, the cathedral schools of Europe, the monasteries of India, or the first Christian missionary schools in tropical Africa. When part of the responsibility for education passed from the home to the church or synagogue, this was the first revolution.

Another revolution, closely related to the first and in many places preceding it, was the adoption of the written word as a tool of education. The written word was not everywhere willingly accepted; indeed some of our colleagues today oppose teaching by television. We have on record the views of Socrates (in *The Phaedrus*) about the dangers of written knowledge:

For this invention of yours will produce forgetfulness in the minds of those who learn it, by causing them to neglect their memory, inasmuch as, from their confidence in writing, they will recollect by the external aid of foreign symbols, and not by the internal use of their

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own faculties.... You could fancy they speak as though they were possessed of sense, but if you wish to understand something they say, and question them about it, you find them ever repeating but one and the selfsame story.

Socrates' objection was that the written word cannot engage in dialectic, that is, the examination of ideas by questioning their logic so as to determine their validity; and dialectic, together with grammar and rhetoric, were for the Greeks the instruments of teaching. The tutorial system, which originated in Greece, relied on oral tradition; and it is interesting that the literary form of much early writing was dialogue. Similar objection to the use of written material in education is reported from the early Indic civilization. In the third century B.C. reign of the Indian emperor Asoka, writing was widely used for administrative purposes, but it was rejected for the transmission of sacred literature: passages from the sacred books had to be communicated by mouth and learned by heart, not read.

The third revolution was the invention of printing. Just as early written material took the form of dialogue, so early printing had the appearance of script. (A modern analogy which can be seen in museums is the way early automobiles were designed, even to the headlamps, to look like horse-coaches). As with the written word, the use of printing to disseminate literature was not everywhere adopted without opposition. For example, because of resistance by traditionalists, notes one historian, "no book was printed in Muslim lands until the year 1825, when a press was set up in Cairo."

The Technological Revolution

We are now confronted by a fourth revolution in education. During this century, for the first time since the invention of printing, new technologies are being adopted in teaching which will certainly transform the whole process of education, though what the transformation will be is still a matter for speculation. The technologies are already familiar: film and gramophone records and their wide dispersion by television and radio; the tape recorder (which improves on the gramophone record because it allows the student to respond); automated teaching by programmed instruction; and, potentially the most important, the digital computer.

How will these techniques change patterns of education? This is my first theme; and it concerns the *means* of education. My second theme is the influence of technology upon the *ends* of education. This is not a new problem, but it has recently acquired an entirely new significance.

In terms of the influence of technology on the methods of education, it is technological advance—the transistor, the videotape, the computer—which makes the fourth educational revolution possible. It is

social advance—egalitarianism and the revolt against elites—which makes the revolution necessary. Less than two generations ago the opportunities for education were sufficient to meet the demand. There was little talk in those days about shortage of teachers or lack of accommodation. Therefore there was no need to examine critically the technology of education. All this has changed. In many countries today there is a grave shortage of teachers, especially in universities and colleges of technology, and the demand for post-secondary education outruns finance, accommodation, and equipment. In some places it assumes the dimensions of an intellectual famine. It is not surprising, therefore, that nations are beginning to ask where the application of technology to educational systems is likely to be rewarding, and where it could be irrelevant or damaging.

Teachers and Productivity

The first impact of the educational explosion is the realization that teachers and buildings must be used as efficiently as possible. Efficiency is a dangerous word to link with education unless it is used with care. Criteria of efficiency appropriate to the culture of oranges do not apply to the culture of children. But we are living in a period of educational revolution and, just because there are certain dangers. we would be foolish to reject out of hand the scientific style of thinking which has improved so many other useful arts: medicine, architecture and agriculture. In British agriculture, for example, the output of food per agricultural worker per year increased by 53 percent between 1951 and 1961. If one makes a similar crude comparison of the output of graduates per university teacher over a similar period, one finds that productivity has not risen: it has declined. The comparison is crude, and some academics indignantly object to such comparisons being made at all. But I suggest that the contrast does justify us in asking a modest question: does modern technology enable us to make better use of our limited supply of teachers?

Any technology which increases the rate of learning enables the teacher to teach less and the learner to learn more. There is no doubt that the devices called "audio-visual aids" do contribute to this end. They provide two channels of access to the mind which can be used simultaneously, through the eye and the ear. Consider the tape recorder. There is no doubt that the student learns a foreign language more easily when what he reads in a book is reinforced by what he hears on tape. And in a language laboratory the student can record his own voice, listen to it himself, and hear his teacher's comments.

As a teaching aid (with emphasis on the word "aid": it is not a substitute for the teacher) the tape recorder, which can bring not only foreign languages but whole courses of lectures into the student's own room, is an educational tool of great promise. So is closed-circuit tele-

vision, whereby the gifted teacher can speak and offer demonstrations to a far larger audience than he could reach by traditional techniques. And a further development is the video-disc, about the size of a gramophone record and costing about three dollars, which provides the student with a half-hour television lesson. Americans have been at great pains to discover whether students learn as much from televised lectures and videotapes as they do from "live" lectures. They find that it makes no difference whether the lecturer is "live" or on a screen, provided the lecturer has initially before him a live audience and is responding to the feedback from his listeners. This is not surprising, for these techniques do not involve any novelty in learning theory.

The Limits of Programmed Instruction

Programmed instruction, however, does involve novel ideas in learning theory, and its efficacy is not yet proven. Nearly 40 years ago, the behavioral psychologist B.F. Skinner demonstrated how pigeons could be taught to perform quite astonishing feats—such as pecking out a tune on a toy piano—provided they were trained in very small steps taken one at a time, and provided each successful step was rewarded with a grain of corn. The reward, which he called "reinforcement," was essential. This led him to suggest that children, too, could be taught complex subjects by breaking the subjects up into very small steps, presenting the steps in one right order, and reinforcing success at each step, not with corn or ice cream but by telling the child immediately that his performance is correct.

Skinner's suggestion is correct. Children do behave like pigeons. And this is why the technique is so dangerous. Pigeons can be taught to play the piano but they cannot be taught to understand music; and except for very limited purposes (such as the memorizing of telephone numbers) rote learning without understanding is useless. The weakness of programmed instruction is that it not only rewards rote learning but, and worse than that, it rewards only those responses which are in agreement with the program. There is no need to emphasize the perils of that sort of conformity. The doubter, the dissenter, the questioner—in short, anyone with an original mind—can get no stimulus or satisfaction out of the program. Furthermore, the declared aim of those who compose programs is to make the steps so simple that the learner does not make mistakes, and so gets his reinforcement at every step; but making mistakes is an essential experience in learning: if you want to train a rat to run a maze, it is no use stopping up all the holes except the right one. In brief, the analogy with pigeons, though correct so far as it goes, goes in the wrong direction. I am reminded of T.H. Huxley's acid criticism of the examination system in England a century ago. Students, he said, work to pass, not to know, and nature takes her revenge: they do pass and they don't know.

But we must be patient about programmed learning, for it is still in the primitive stage comparable to that of type in Gutenberg's first book or coachwork in Daimler's first automobile. If we could devise really sophisticated machines which could conduct a dialogue with the student and not merely reward him when he gives the orthodox response, then there are doubtless certain dreary stretches of didactic teaching which a student could be expected to get from a machine in his own time; and this would release the teacher for more subtle (and far more important) activities of teaching.

We know already that machines as sophisticated as this can be devised with more facts at their fingertips than any teacher could have, and even with some capacity for encouraging dissent. At present such a machine would be many orders of magnitude more expensive than a teacher. Moreover, its life expectancy would be only about one-eighth that of a teacher. But before the end of this century such machines will certainly be on the market. Just what part they play in the fourth educational revolution will depend on the skill which goes into programming them. A great deal of research will be necessary before we have a theory of teaching which enables us to prepare programs properly. I doubt whether the machines will be really useful until we understand how the human brain codes information (you could not program even a simple computer unless you understood how it coded information); and we are still quite in the dark about the coding process in the human brain.

The Dangers of Computers

The development of the computer will make sophisticated teaching machines possible; and it is bound to revolutionize education in other ways as well. But what about the dangers of successful computers? For instance, a computer with a plausible program or a political "opinion" could influence the public through a new sort of mass education. Computer-aided predictions of election results are a form of mass education; but education can do harm as well as good. A computerized election prediction tells the man-in-the-street which way the political tide is running. The advertising trade has conditioned him to swim with the tide; so the group of people who publish the prediction may (unconsciously or even deliberately) influence thousands of votes.

There may be the same danger even in traditional forms of education if they are programmed by these techniques for the use of, perhaps, millions of pupils. The groups of people who may, in the future, control the sophisticated programming of curricula, especially in the humanities and social sciences, may come to have a terrifyingly powerful influence on the minds of the young. The program put out by great educational syndicates could become the new orthodoxy. In a nation where there is freedom of thought and a great diversity of textbooks

there is no serious risk that the whole teaching profession will impose one monolithic system of orthodoxy. But commercialized computer education may require us to protect the young, even in a democracy, against the dangers of orthodoxy.

This raises one fear about the fourth educational revolution which I do not share: the fear that it will put teachers out of work. Five centuries of the printed book have not diminished the need for the lecture. seminar, and tutorial. In most fields of knowledge—even in science and technology—the intuitive value judgment, the leap of imagination, and the processing of data by analogy rather than by deduction, are characteristic of the best kind of education. We know no way to elicit these except through dialogue between the teacher and the pupil. The most precious qualities transmitted from teacher to pupil are not facts and theories, but attitudes of mind and styles of thinking. These qualities demand continuous exposure of the pupil to the teacher over long periods, with the subtle effects which come from weekly correction of essays and comments during seminars: the slow progress toward what I regard as the supreme ends of academic higher education: mastery of words as symbols of ideas and of signs as symbols of mathematics, and mastery of the dialectic between orthodoxy and dissent which enables man constantly to reexamine and reassess knowledge.

While we must be on our guard, therefore, against naive applications of scientific analysis to the concept of the efficiency of teachers, the scientific approach has already yielded results in two other areas of university efficiency. One is the optimum use of facilities. The Americans have been taking this problem very seriously. They not only collect and analyze data; they also promote large-scale experiments to make fuller use of university and school buildings. The results of their experiments are encouraging. Many institutions, ranging from small liberal arts colleges to universities with enrollments of over 15,000, have rearranged their academic year to increase the use of their buildings and equipment. The main effect of these experiments is to speed the flow of students through higher education.

Balancing Change and Continuity

A second area for employing scientific principles is in applying the concepts of communication theory to educational planning. We are now reconciling ourselves to the idea that education is not a private responsibility, and that in planning it we must take account of manpower needs and economic conditions. Within the general framework of democratic government, schools and colleges constitute a self-regulating system. The system should change in response to a feedback of information, from governments, employers, parents, and students. It is a system much too complicated to yield to rigid mathematical treatment, but some of the ideas used in communication theory can

nevertheless be fruitful for efficient planning. Thus a self-regulating system must be sensitive to the information it receives, so that the content of courses, the balance of subjects taught, and the distribution of students among different disciplines may respond to new circumstances.

But the system must not be too sensitive; unless there is some inertia the system will become unstable. I suppose resistance to change is the besetting sin of educational systems; so it is comforting to recognize that there are virtues in inertia. The condition for success of a self-regulating system is that the information fed back to the system automatically sets the control in the right position to respond to the information. If this is to happen in an education system without constant and exasperating vacillations of policy, the information has to include an estimate of the rate of change to which the system must adapt itself.

Thus, to take a very simple example, information that a thousand more engineers are now needed cannot elicit a satisfactory response from an educational system. But information that the output of engineers should increase by five percent a year over a five-year period is information to which the system can respond. The operation of an educational system is complicated by the fact that there is an inevitable lag period between receiving information and producing a response: it takes a university four years or more to produce an engineer, and by the time the response comes, there may be fresh feedbacks of information which make the response inappropriate.

Technology and the University

This concept of self-regulation—which means, among other things, that an educational system should continuously adapt the content of its courses to the needs of the society it serves—introduces my last theme: the impact of technology on curricula in higher education.

It is characteristic of technologies that they began as useful arts without science (the art of healing, the art of war, the art of building temples and churches, the art of building roads and bridges); it is only late in their history that scientific principles have been so vigorously applied to them. The art of teaching is one of the last of the useful arts to become technological. But we must view technologies as not just applications of science to social needs; they are also expressions of humanism.

Today, unfortunately, the scientific content of technologies is so heavily emphasized that their human content is often neglected. Here is one example. Professors of engineering in Britain assert proudly that by the time their graduates are 40 years of age many of them are no longer doing engineering; they are managers or directors or administrators dealing not with machines but with men and women. But in the curricula of the engineering faculties of most British uni-

versities there is only lukewarm recognition of this fact. The university may offer voluntary lectures on humanities and social science for scientists and technologists, but it is still uncommon to find, as an integral and examinable part of an engineering course, material on industrial history, social psychology, labor relations, or political institutions; and it is very rare to find any obligation on students in technology to reflect on the ethics of leadership or to consider in a scholarly way such values as justice, magnanimity, virtue, and the whole traffic of relations between man and man. Can we assume that an understanding of these values has been acquired at school—or that for the practice of technology, it is unnecessary to understand them? Neither assumption would be correct.

Emphasizing Humanism

It would be totally unrealistic to pretend that the teaching of technology as applied science could or should be reduced; its splendid achievements in this century are due to the application of science. But this is no justification for crowding out of the curriculum the teaching of technology as humanism. The human element in technology is no frill. As machines become more sophisticated the human problems of technology become more challenging. One needs only to look at industry today to see that its chief technological weakness is not that the machines are primitive but that our understanding of industrial sociology is primitive. High wages, commercial television, and spectator sports act as sedatives for human problems created by technology, but they do not solve these problems. These unsolved problems cannot be studied in the design office; the place to study them is in the seminar on social philosophy and in the literature class, reading Shakespeare's tragedies, Gogol's novels, and Ibsen's plays.

This train of argument leads me to the conclusion that an undergraduate course in technology which does not include a serious element of humanities and social sciences is simply not meeting the needs of society. This conclusion is valid not only in advanced countries; it is equally valid in developing countries. Thus a close examination of the problems of African agriculture reveals that the stagnation of farming in some areas is due not to lack of science but to the operation of tribal laws, evolved in an earlier setting, for the inheritance of land and cattle. A realistic training in technology for African agriculture should therefore include social anthropology, sociology, and customary law: these factors are as important as nitrogen, phosphorus, and potash.

That is one reason why humanism and the social sciences are inseparable from the physical sciences in technological education. There is another reason resting in the nature of technology itself. A scientist works by isolating very few variables from a whole situation and drawing conclusions about cause and effect among these variables. He cannot Ω

succeed without abstraction from reality. From the point of view of the administrator, the scientist oversimplifies. Thus in my own field of interest there are some elegant mathematical theories of evolution. They are worth studying as an aid to clarification and precision of thought, but they have practically no relevance to the actual process of evolution as read in the fossil record.

This privilege of oversimplification is one of the accepted conventions of science and is abundantly justified by its results. But technology enjoys no such privilege. One cannot design a radio set without paying attention to its appearance, which involves aesthetics; or to its cost, which involves economics; or to the use which people will make of it, which involves sociology and public policy over broadcasting. Human problems are woven into the very texture of technology.

Need for a Common Core

The grand tradition of western education used to be that every educated man drew his culture from the same well. This was his equipment for living in society. The common well of culture from Italy to Scotland contained waters from Judea, Greece, and Rome. In Europe this is no longer true; education has become so diversified and specialized that it no longer transmits a European culture: it transmits only fragments of a culture. I believe this is the cause of many of our international tensions. Is it possible to reconcile the need for specialization in science and technology with the need for a common core of culture? I think it is.

The solution is not to look for eternal truths, because adherents of different religions and those with no religious convictions at all are not likely to agree on what the eternal truths are. But there are eternal issues never more sharply focused than they are today: urban decay, racial or religious or tribal antagonism, the continued contrast between famine in one area and surplus in another, and the hovering fear of environmental crisis or nuclear war. All these problems are intensified by the achievements of science and technology. How can education contribute to their understanding and solution? Surely by introducing the humanities into a scientific education, in such a way as to emphasize the ethical and social consequences of technological achievement: you cannot build a road, or an airstrip, or a radio transmitter, without profoundly changing the lives of men and women. It is the injection of ideas such as these into technology and politics which may yet carry the world into the next century without disaster.

WHY WE LAUGH

By Arthur Koestler

Laughter is a universal human response, yet it has been little studied by either scientists or humanists. Why does a cartoon provoke a smile, or a quiet anecdote produce loud guffaws? In the following article, abridged from the latest edition of the Encyclopedia Britannica, a humanist turned scientist offers some intriguing explanations, along with examples of humor and distinctions among its many varieties.

Arthur Koestler achieved literary fame with his novel, Darkness at Noon, which had as its setting the Moscow purge trials of the 1930's. His earlier novels, autobiographical works and essays dealt with European politics and society. His most recent books have been concerned with science (The Sleepwalkers, The Ghost in the Machine), mysticism (The Lotus and the Robot), and psychology (The Act of Creation, which includes a further discussion of the nature of humor).



as a type of stimulation that tends to elicit the laughter reflex. Spontaneous laughter is, in purely physical terms, a motor reflex produced by the coordinated contraction of 15 facial muscles in a stereotyped pattern and accompanied by altered breathing. We can by electrical stimulation of the main lifting muscle of the upper lip with currents of varying intensity, produce facial expressions ranging from the faint smile through the broad grin to the contortions typical of explosive laughter.

The laughter and smile of civilized man are, of course, often of a conventional kind, in which voluntary intent substitutes for, or interferes with, spontaneous reflex activity; this article is concerned, however, only with the latter. Once laughter is realized to be a humble reflex, several paradoxes must be faced. Motor reflexes, such as the contraction of the pupil of the eye in dazzling light, are simply responses to simple stimuli whose value to survival is obvious. But the involuntary contraction of 15 facial muscles, associated with certain irrepressible noises, strikes one as an activity without any utilitarian value, quite unrelated to the struggle for survival. Laughter is a reflex, but unique in that it

¹⁹⁷⁴ by Encyclopedia Britannica, inc.



Drawing by Saul Steinberg. Copyright © 1953 by Saul Steinberg. From The Passport in The New Yorker.

has no apparent biological purpose. One might call it a luxury reflex. Its only function seems to be to provide relief from tension.

The second related paradox is a striking discrepancy between the nature of the stimulus and that of the response in humorous transactions. When a blow beneath the kneecap causes an automatic upward kick, both "stimulus" and "response" function on the same primitive physiological level, without requiring the intervention of the higher mental functions. But that such a complex mental activity as reading a comic story should cause a specific reflex contraction of the fa-(Harper & Row, Publishers, Inc.). Originally cial muscles is a phenomenon that has puzzled philosophers since Plato.

There is no clear-cut, predictable response that would tell a lecturer whether he has succeeded in convincing his listeners; but when he is telling a joke, laughter serves as an experimental test. Humor is the only form of communication in which a stimulus on a high level of complexity produces a stereotyped, predictable response on the psychological reflex level. Thus the response can be used as an indicator for the presence of the elusive quality that is called humor—as the click of the Geiger counter is used to indicate the presence of radioactivity. Such a procedure is not possible in any other form of art; and since the step from the sublime to the ridiculous is reversible, the study of humor provides the psychologist with clues for the study of creativity in general.

The Logic of Laughter

The range of laughter-provoking experiences is enormous, from physical tickling to mental titillations of the most varied kinds. There is unity in this variety, however, a common denominator of a specific and specifiable pattern that reflects the "logic" or "grammar" of humor, as it were. A few examples will help to unravel that pattern.

- A masochist is a person who likes a cold shower in the morning—so he takes a hot one.
- An English lady, on being asked by a friend what she thought of her departed husband's whereabouts: "Well, I suppose the poor soul is enjoying eternal bliss, but I wish you wouldn't talk about such unpleasant subjects."

- A doctor comforts his patient: "You have a very serious disease.
 Of ten persons who catch it, only one survives. It is lucky you came to me, for I have recently had nine patients with this disease and they all died of it."
- Dialogue in a French film:
 "Sir, I would like to ask for your daughter's hand."
 "Why not? You have already had the rest."
- A marquis of the court of Louis XV unexpectedly returned from a
 journey and, on entering his wife's boudoir, found her in the arms
 of a bishop. After a moment's hesitation, the marquis walked calmly
 to the window, leaned out, and began going through the motions
 of blessing the people in the street.
 - "What are you doing?" cried the anguished wife.
 - "Monseigneur is performing my functions, so I am performing his."

Is there a common pattern underlying these five stories? Starting with the last, a little reflection reveals that the marquis' behavior is both unexpected and perfectly logical—but of a logic not usually applied to this type of situation. It is the logic of the division of labor, governed by rules as old as human civilization. But his reactions would have been expected to be governed by a different set of rules—the code of sexual morality. It is the sudden clash between these two mutually exclusive codes of rules—or associative contexts—that produces the comic effect. It compels the listener to perceive the situation in two self-consistent but incompatible frames of reference at the same time; his mind has to operate simultaneously on two different wavelengths.

A Sudden Leap

The term "bisociation" was coined by the present writer to make a distinction between the routines of disciplined thinking within a single universe of discourse—on a single plane, as it were—and the creative types of mental activity that always operate on more than one plane. In humor, both the creation of a subtle joke and the re-creative act of perceiving the joke involve the delightful mental jolt of a sudden leap from one plane or associative context to another. Thus the malicious and erotic feelings aroused by the start of the marquis story cannot be fitted into the new context of his blessing the people in the street. Deserted by the nimble intellect, these feelings gush out in laughter like air from a punctured tire.

Turning to the other examples, in the French film dialogue the daughter's "hand" is perceived first in a metaphorical frame of reference, then suddenly in a literal bodily context. The doctor who reassures his patient is thinking in terms of abtract, statistical probabilities, overlooking the fact that the patient's odds of survival are unaffected by whatever happened before; they are still one against ten. This is one of the profound paradoxes of the theory of probability, and the joke in fact implies a riddle; it pinpoints an absurdity that tends to be taken

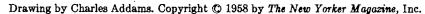
for granted. As for the lady who looks upon death as "eternal bliss" and at the same time "an unpleasant subject," she epitomizes the common human predicament of living in the divided house of faith and reason. Here again the simple joke carries unconscious overtones and undertones, audible to the inner ear alone.

Finally, the masochist who punishes himself by depriving himself of his daily punishment is governed by rules that are a reversal of those of normal logic. (A pattern can be constructed in which both frames of reference are reversed: "A sadist is a person who is kind to a masochist.") But there is again an added twist. The joker does not really believe that the masochist takes his hot shower as a punishment; he only pretends to believe it. Irony is the satirist's most effective weapon; it pretends to adopt the opponent's ways of reasoning in order to expose their implicit absurdity or viciousness.

Thus the common pattern underlying these stories is the perceiving of a situation in two self-consistent but mutually incompatible frames of reference. This formula can be shown to have a general validity for all forms of humor and wit, some of which will be discussed below. But it covers only one aspect of humor—its intellectual structure. Another fundamental aspect must be examined—the emotional dynamics that breathe life into that structure and make a person laugh, giggle, or smile.

Laughter and Emotion

When a comedian tells a story, he deliberately sets out to create a certain tension in his listeners, which mounts as the narrative progresses. But it never reaches its expected climax. The punch line, or point, acts





as a verbal guillotine that cuts across the logical development of the story; it debunks the audience's dramatic expectations. The tension that was felt becomes suddenly redundant and is exploded in laughter.

A glance at the caricatures of the 18th-century English artists William Hogarth or Thomas Rowlandson, showing the brutal merriment of people in a tavern, makes one realize at once that they are working off their surplus of adrenalin by contracting their face muscles into grimaces, slapping their thighs, and breathing in puffs through the half-closed glottis. Their flushed faces reveal that the emotions disposed of through these safety valves are brutality, envy, sexual gloating. In cartoons by the 20th-century American James Thurber, however, coarse laughter yields to an amused and rarefied smile: the flow of adrenalin has been distilled and crystallized into a grain of Attic salt—a sophisticated joke.

The word "witticism" is derived from "wit" in its original sense of intelligence and acumen. The domains of humor and of ingenuity are continuous, without a sharp boundary: the jester is brother to the sage.

There is a bewildering variety of moods involved in different forms of humor, including mixed or contradictory feelings. But whatever the mixture, it must contain a basic ingredient that is indispensable: an impulse, however faint, of aggression or apprehension. It may appear in the guise of malice, contempt, the veiled cruelty of condescension, or merely an absence of sympathy with the victim of the joke—a momentary anesthesia of the heart, as the French philosopher Henri Bergson put it.

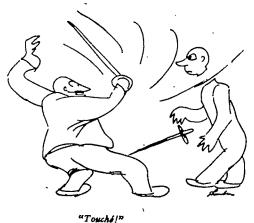
In the subtler types of humor, the aggressive tendency may be so faint that only careful analysis will detect it, like the presence of salt in a well-prepared dish—which, however, would be tasteless without it. Replace aggression by sympathy and the same situation—a drunk falling on his face, for example—will be no longer comic but pathetic, and will evoke not laughter but pity. It is the aggressive element, the detached malice of the comic impersonator, that turns pathos into bathos, tragedy into travesty. Malice may be combined with affection in friendly teasing; and the aggressive component in civilized humor may be sublimated or no longer conscious. But in jokes that appeal to children and primitive people, cruelty and boastful self-assertiveness are much in evidence.

Similar considerations apply to the historically earlier forms and theories of the comic. In Aristotle's view—shared by Cicero, Descartes, and Francis Bacon—laughter was intimately related to ugliness, and Thomas Hobbes found that "the passion of laughter... arises from a sudden conception of some eminency in ourselves by comparison with the infirmity of others." In Bergson's view, laughter is the corrective punishment inflicted by society upon the unsocial individual: "In laughter we always find an unavowed intention to humiliate and

consequently to correct our neighbor." Sir Max Beerbohm, the 20th-century English wit, found "two elements in the public's humor: delight in suffering, contempt for the unfamiliar." The American psychologist William McDougall believed that "laughter has been evolved in the human race as an antidote to sympathy, a protective reaction shielding us from the depressive influence of the shortcomings of our fellow men."

An Element of Aggressiveness

However much the opinions of the theorists differ, on this one point nearly all of them agree: that the emotions discharged in laughter always contain an element of aggressiveness. It must be borne in mind, however, that aggression and apprehension are twin phenomena, so much so that psychologists are used to talking of "aggressive-defensive impulses." Accordingly, one of the typical situations in which laughter occurs is the moment of sudden cessation of fear caused by some imaginary danger. Rarely is the nature of laughter as an overflow of redundant tensions more strikingly manifested than in the sudden change of expression on a small child's face from anxious apprehension to the happy laughter of relief.



Copyright © 1945 James Thurber. Copyright © 1978 Helen W. Thurber and Rosemary T. Sauers. From *The Thurber Carnival*, published by Harper and Row, New York. Originally printed in *The New Yorker*.

Sigmund Freud emphasized the release of repressed emotions in laughing. Thus the explosive exhalations of laughter seem designed to "puff away" surplus tension in a kind of respiratory gymnastics, and agitated gestures obviously serve the same function. It may be objected that such massive reactions often seem quite out of proportion to the slight stimulations that provoke them. But it must be borne in mind that laughter is a phenomenon of the trigger-releaser type, where a sudden turn of the tap may release vast amounts of stored emotions, derived from various, often unconscious, sources. The

explosive laughter of a class of schoolboys at some trivial incident is a measure of their pent-up resentment during a boring lecture. Another factor that may amplify the reaction out of all proportion to the comic stimulus is the social infectiousness that laughter shares with other emotive manifestations of group behavior.

Laughter or smiling may also be caused by stimulations that are not in themselves comic but signs or symbols deputizing for well-established comic patterns—such as Charlie Chaplin's oversized shoes or Groucho Marx's cigar—or catchphrases, or allusions to family jokes. To discover why people laugh requires, on some occasions, tracing back a long, involved thread of associations to its source. Here memory comes into play, having already accumulated the required emotions in past experiences, acting as a storage battery whose charge can be sparked off at any time. All of this shows that to analyze humor is a task as delicate as analyzing the composition of a perfume with its multiple ingredients, some of which are never consciously perceived while others, when sniffed in isolation, would make one wince.

Verbal Humor

Max Eastman, in *The Enjoyment of Laughter*, remarked of a labored pun by Ogden Nash: "It is not a pun but a punitive expedition." Most puns strike one as atrocious, perhaps because they represent the most primitive form of humor; two disparate strings of thought tied together by an acoustic knot. But the very primitiveness of such association based on pure sound may account for the pun's immense popularity with children and its prevalence in certain types of mental disorder ("punning mania").

Puns, like jokes and anecdotes, have a single point of culmination. The literary forms of sustained humor, such as the picaresque novel, do not rely on a single effect but on a series of minor climaxes. The narrative moves along the line of intersection of contrasted planes, such as the fantasy world of Don Quixote and the cunning horse sense of Sancho Panza, or is made to oscillate between them. As a result, tension is continuously generated and discharged in mild amusement.

Comic verse thrives on the melodious union of incongruities, such as the "cabbages and kings" in Lewis Carroll's "The Walrus and the Carpenter," and particularly on the contrast between lofty form and flat-footed content. Certain metric forms associated with heroic poetry, such as the hexameter or Alexandrine, arouse expectations of pathos, of the exalted; to pour into these epic molds some homely, trivial content is an almost infallible comic device. The rolling rhythms of the first lines of a limerick that carry, instead of a mythical hero such as Hector or Achilles, a young lady from Ohio for a ride make her ridiculous even before the expected calamities befall her.

The satire is a verbal caricature that shows a deliberately distorted image of a person, institution, or society. The traditional method of the caricaturist is to exaggerate those features he considers to be characteristic of his victim's personality and to simplify by leaving out everything that is not relevant for his purpose. The satirist uses the same technique, and the features of society he selects for magnification are, of course, those of which he disapproves. The result is a juxtaposition, in the reader's mind, of his habitual image of the world in which he moves and its absurd reflection in the satirist's distorting mirror. He is made to recognize familiar features in the absurd and absurdity in the familiar. Without this double vision the satire would be humorless. If the human Yahoos were really such evil-smelling monsters as Gulliver's Houyhnhnm hosts claim, then Jonathan Swift's Gulliver's Travels would not be a satire but the statement of a deplorable truth. Straight invective is not satire; satire must deliberately overshoot its mark.

A similar effect is achieved if, instead of exaggerating the objectionable features, the satirist projects them by means of the allegory onto a different background, such as an animal society. A succession of writers, from the ancient Greek dramatist Aristophanes through Swift to such 20th-century satirists as Anatole France and George Orwell, have used this technique to focus attention on deformities of society that, blunted by habit, are taken for granted.

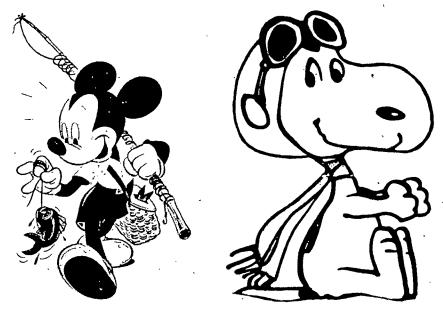
Situational Humor

The coarsest type of humor is the practical joke: pulling away the chair from under the dignitary's lowered bottom. The victim is perceived first as a person of consequence, then suddenly as an inert body subject to the laws of physics: authority is debunked by gravity, mind by matter; man is degraded to a mechanism. The Sergeant Major attacked by diarrhea or Hamlet getting the hiccups show man's lofty aspirations deflated by his all-too-solid flesh. A similar effect is produced by artifacts that masquerade as humans: Punch and Judy, jack-in-the-box, gadgets playing tricks on their masters as if with calculated malice.

In Henri Bergson's theory of laughter, this dualism of subtle mind and inert matter—he calls it "the mechanical encrusted on the living"—is made to serve as an explanation of all varieties of the comic. In the light of what has been said, however, it would seem to apply only to one type of comic situation among many others.

From the "bisociation" of man and machine there is only a step to the man-animal hybrid. Walt Disney's animated cartoon creations behave as if they were human without losing their animal appearance. The caricaturist follows the reverse procedure by discovering horsey, mousy, or piggish features in the human face.

This leads to the comic devices of imitation, impersonation, and disguise. The impersonator is perceived as himself and somebody else



Walt Disney's Mickey Mouse and Charles M. Schulz's Snoopy (the fantasizing dog in the popular "Peanuts" comic strip) "behave as if they were human without losing their animal appearance."

at the same time. If the result is slightly degrading—but only in that case—the spectator will laugh. The comedian impersonating a public personality, two pairs of trousers serving as the legs of the pantomime horse, men disguised as women and women as men—in each case the paired patterns reduce each other to absurdity.

The most aggressive form of impersonation is the parody, designed to deflate hollow pretense, to destroy illusion, and to undermine pathos by harping on the weaknesses of the victim. Wigs falling off, speakers forgetting their lines, gestures remaining suspended in the air: the parodist's favorite points of attack are again situated on the line of intersection between the sublime and the trivial.

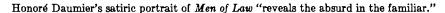
Playful behavior in young animals and children is amusing because it is an unintentional parody of adult behavior, which it imitates or anticipates. Young puppies are droll because their helplessness, affection, and puzzled expression make them appear more "human" than full-grown dogs; because their growls strike one as impersonations of adult behavior—like a child in a bowler hat; because the puppy's waddling, uncertain gait makes it a choice victim of nature's practical jokes; because its bodily disproportions—the huge padded paws, Falstaffian belly, and wrinkled brow—give it the appearance of a caricature; and lastly because the observer feels so very superior to a puppy. A fleeting smile can contain many logical ingredients and emotional spices.

Why tickling should produce laughter remained an enigma in all earlier theories of the comic. As Darwin was the first to point out, the

innate response to tickling is squirming and straining to withdraw the tickled part—a defense reaction designed to escape attacks on vulnerable areas such as the soles of the feet, armpits, belly, and flank. The child will laugh only—and this is the crux of the matter—when it perceives tickling as a mock attack, a caress in mildly aggressive disguise. Thus the tickler is impersonating an aggressor but is simultaneously known not to be one. This is probably the first situation in life that makes the infant live on two planes at once, a delectable foretaste of being tickled by the horror comic.

The Visual Arts and Music

Humor in the visual arts reflects the same logical structures as discussed before. Its most primitive form is the distorting mirror at the fun fair, which reflects the human frame elongated into a column or compressed into the shape of a toad. It plays a practical joke on the victim, who sees the image in the mirror both as his familiar self and as a lump of plasticine that can be stretched and squeezed into any absurd form. The mirror distorts mechanically while the caricaturist does so selectively, employing the same method as the satirist—exaggerating characteristic features and simplifying the rest. Like the satirist, the caricaturist reveals the absurd in the familiar; and, like the satirist, he must overshoot his mark. His malice is rendered harmless by the knowledge that the monstrous potbellies and bowlegs he draws are not real; real deformities are not comic but arouse pity.





The artist, painting a stylized portrait, also uses the technique of selection, exaggeration, and simplification; but his attitude toward the model is usually dominated by positive empathy instead of negative malice, and the features he selects for emphasis differ accordingly. In some character studies by Leonardo da Vinci, Hogarth, or Honoré Daumier, the passions reflected are so violent, the grimaces so ferocious, that it is impossible to tell whether the works were meant as portraits or caricatures. If one feels that such distortions of the human face are really not possible, that Daumier merely pretended that they exist, then one is absolved from horror and pity and can laugh at his grotesques. But if one feels that this is indeed what Daumier saw in those dehumanized faces, then they are not comic but tragic.

Humor in music is a subject to be approached with diffidence because the language of music ultimately eludes translation into verbal concepts. All one can do is to point out some analogies: a "rude" noise, such as the blast of a trumpet inserted into a passage where it does not belong, has the effect of a practical joke; a singer or an instrument out of tune produces a similar reaction; the imitation of animal sounds, vocally or instrumentally, exploits the technique of impersonation; a nocturne by Chopin transposed into hot jazz, or a simple street song performed with Wagnerian pathos, is a marriage of incompatibles. These are primitive devices corresponding to the lowest levels of humor. More sophisticated are the techniques employed by Maurice Rayel in La Valse, a parody of the sentimental Viennese waltz, or by Zoltan Kodaly in the mock-heroics of his Hungarian folk opera, Hary Janos. But in comic operas it is almost impossible to sort out how much of the comic effect is derived from the book and how much from the music. And the highest forms of musical humor, the unexpected delights of a lighthearted scherzo by Mozart, defy verbal analysis, unless it is so specialized and technical as to defeat its purpose. Although a "witty" musical passage that springs a surprise on the audience and cheats it of its expectations certainly has the emotion-relieving effect that tends to produce laughter, a concert audience may occasionally smile but will hardly ever laugh: the emotions evoked by musical humor are of a subtler kind than those of the verbal and visual variety.

Parallels with Art and Science

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Earlier theories of humor treated it as an isolated phenomenon, without attempting to throw light on the intimate connections between the comic and the tragic, between laughter and crying, between artistic inspiration, comic inventiveness and scientific discovery. Yet these three domains of creative activity form a continuum with no sharp boundaries between wit and ingenuity, nor between discovery and art.

It has been said that scientific discovery consists in seeing an analogy where nobody has seen one before, as when William Harvey compared





The caricature of dancer-choreographer Martha Graham was done by Al Hirschfeld, who specializes in theatrical performers. David Levine's portrait of The Beatles reflects the sardonic eye and fine line that has earned him the sobriquet of "an American Daumier."

the heart of a fish to a mechanical pump. And when the caricaturist draws a nose like a cucumber, he does the same. In fact, all the logical patterns discussed above, which constitute a "grammar" of humor, can also enter the service of art or discovery, as the case may be. The pun has structural equivalents in the rhyme and in word games, which range from crossword puzzles to the deciphering of the Rosetta Stone, the key to Egyptian hieroglyphic. The confrontation between diverse codes of behavior may yield comedy, tragedy, or new psychological insights. The dualism of mind and inert matter is exploited by the practical joker but also provides one of the eternal themes of literature; man as a marionette on strings, manipulated by gods or chromosomes.

Contemporary psychology regards the conscious and unconscious processes underlying creativity in all domains as an essentially combinative activity—the bringing together of previously separate areas of knowledge and experience. The scientist's purpose is to achieve synthesis; the artist aims at a juxtaposition of the familiar and the eternal; the humorist's game is to contrive a collision. And as their motivations differ, so do the emotional responses evoked by each type of creativity; discovery satisfies the exploratory drive; art induces emotional catharsis; humor arouses malice and provides a harmless outlet for it. Laughter has been described as the "Haha reaction"; the discover's Eureka cry as the "Aha! reaction"; and the delight of the aesthetic experience as the "Ah...reaction." But the transitions from one to the other are continuous: witticism blends into epigram, caricature into portrait. Whether one considers architecture, medicine, chess, or cookery, there is no clear frontier where the realm of science ends and that of art begins:

the creative person is a citizen of both. Comedy and tragedy, laughter and weeping, mark the extremes of a continuous spectrum.

Humor today seems to be dominated by two main factors: the influence of the mass media and the crisis of values affecting a culture in rapid and violent transition. The former tends toward the commercialized manufacture of laughter by popular comedians and gags produced by conveyor-belt methods; the latter toward a sophisticated form of "black" or absurdist humor. Fashions, however, always run their course. The only certainty regarding the humor of the future is contained in Dr. Samuel Johnson's dictum: "Sir, men have been wise in many different modes, but they have always laughed in the same way."

7

H.P. LOVECRAFT: MASTER OF FANTASY

By L. Sprague de Camp



For a growing worldwide cult of admirers, H.P. Lovecraft is the true successor to (for some, the equal of) Edgar Allan Poe, at least in the realm of fantasy fiction. But others have derided him for his verbose style and grotesque characters. Here a fellow-practitioner of science fiction and the fantastic tale offers a fresh evaluation of Lovecraft's life and work.

L. Sprague de Camp is the author of more than 75 books, including popularizations of science, biographies, historical fiction, verse, and such well-known science fiction novels as Lest Darkness Fall and Rogue Queen. His most recent book, Lovecraft: A Biography (published by Doubleday in 1974) has helped to spread that writer's fame.

hen Howard Phillips Lovecraft died in 1937, he was almost unknown outside a small group of connoisseurs of fantastic fiction. Not a single book of his stories had been professionally published, although friends had made abortive amateur efforts. The chapter on Rhode Island's writers in a guidebook to that state, issued in the year of his death, does not mention his name. Lovecraft deemed himself an utter failure, a "total loss."

Less than 40 years later, Lovecraft's works—various collections of his 60-odd stories—were selling by the hundreds of thousands. Collectors paid up to \$100 each for his letters, of which he wrote an estimated 100,000, putting him in a class with Voltaire and Leibnitz as one of the most prolific letter-writers of all time. Admirers make pilgrimages to his grave in Providence, the capital of Rhode Island. He has been the subject of a play and a number of scholarly disquisitions.

Lovecraft's stories have been translated into half a dozen languages; and he has been hailed, in Latin America and Europe, as the compeer of Edgar Allan Poe, whom he greatly admired. A story published in 1975 by the great Argentine writer, Jorge Luis Borges, is dedicated to the memory of Lovecraft. A Spanish essayist, José Luis Garcia, pronounced Lovecraft one of the ten greatest writers of all time. Michel de Ghelrode of Belgium ranks him as one of America's four greatest writers—the others being Poe, Ambrose Bierce, and Walt Whitman. In France, writer and film-maker Jean Cocteau was only one of many outspoken admirers of Lovecraft. In 1973, the newspaper La Opinion of Buenos Aires devoted an entire weekend cultural supplement to

the American story-teller.

Lovecraft's posthumous fame is largely the work of a younger American writer, who had admired and corresponded with him. After Lovecraft's death, August W. Derleth (1909-71) of Sauk City, Wisconsin, founded a publishing company, Arkham House, mainly to publish Lovecraft's stories in book form. Thanks to Derleth's herculean efforts, interest in Lovecraft slowly grew, and the writer gradually attracted the attention of literary critics.

The Case against Lovecraft

When, in 1945, that formidable dean of American critics, the brilliant but opinionated Edmund Wilson, wrote a column on horror stories for *The New Yorker*, correspondents reproached him for not mentioning Lovecraft. Having read but not liked some Lovecraft stories, Wilson gave the Providence fantasist a closer look. In tones of magisterial doom, he announced:

I regret that, after examining these books, I am no more enthusiastic than before. The principal feature of Lovecraft's work is an elaborate concocted myth which provides the supernatural element for his most admired stories. This myth assumes a race of outlandish gods and grotesque prehistoric peoples who are always playing tricks with time and space and breaking into the contemporary world, usually somewhere in Massachusetts....

The only real horror in most of these fictions is the horror of bad taste and bad art. Lovecraft was not a good writer. The fact that his verbose and undistinguished style has been compared to Poe's is only one of the many sad signs that almost nobody any more pays any real attention to writing.

Wilson conceded to Lovecraft a sound knowledge of the earlier writers of Gothic fiction and "a scientific imagination similar, though much inferior, to that of the early H.G. Wells," but deemed his post-humous cult "infantile." Since Wilson also dismissed Dunsany, Machen, and Tolkien, one suspects that he did not really like any fantasy.

In 1962, another Wilson—Colin, a versatile British writer and critic—considered Lovecraft in a book, *The Strength to Dream*. This Wilson was struck by Lovecraft's obvious neuroticism, calling him a "horrifying figure... totally withdrawn; he had rejected 'reality'; he seems to have lost all sense of health..." Nonetheless:

He began as one of the worst and most florid writers of the 20th century, but finally developed a certain discipline and economy—although he always remained fond of words like "eldritch" and "grotesque," and such combinations as "black, clutching panic" and "stark, utter horror." Two short novels, The Shadow Out of Time and The Case of Charles Dexter Ward are certainly minor classics of horror fiction; while at least a dozen stories deserve to survive.

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While more temperate than the other Wilson, Colin Wilson misjudged Lovecraft. He credited the staunchly materialistic atheist with wishing to "undermine reality" and prove the existence of transcendental beings and powers. Taking the stories more seriously than their author did, he ignored their playful element.

Among others who have commented on Lovecraft, Professor John A. Taylor called him "the greatest American author of horror tales since Poe," while Isaac Asimov (himself a noted writer of science fiction) dismissed Lovecraft as a "sick juvenile." Drake Douglas, author of *Horror*!, a study of the grisly Gothic tale, wrote:

Probably no other writer of horror—including the master Poe himself—was so successful in creating the very atmosphere of fear and terror.... Lovecraft's are, indeed, among the best-written short stories produced in this country, and only their content—for too often, even now, the writing of horror is not considered as serious literature prevents them from being considered as models of form and style.

Evidently, knowledgeable persons differ about Lovecraft. But whether one likes his work or not, he is a writer to be taken seriously.

The Emergence of a Writer

Lovecraft was born in Providence in 1890 and lived there all his life, save for two years in New York and later travels about the United States and Canada. His father, a traveling salesman of silverware, went insane when Lovecraft was three and died when he was eight. His mother, of an old Rhode Island family, also went insane when Lovecraft was twenty-nine and died two years later. Meanwhile she had fantastically spoiled and coddled her only child, to the point where he could never realistically cope with the world. Unable to handle the business side of his affairs, he excused his ineptness on the ground that, as a "gentleman," he despised all such "commercialism."

As a boy and a youth, Lovecraft suffered several breakdowns in health. That of 1908 brought his formal education to an end while he was still in high school. He dropped out and spent a number of years in reclusive idleness, doing little other than reading.

From 1915 to 1922, Lovecraft published many poems, essays, and stories in non-paying amateur publications. The poems were soporific imitations of 18th-century verse, in the style of Pope and Dryden.



The essays preached belligerent nationalism and Anglo-Saxon superiority, bigoted views which he regretted and rejected in later years when he became a mild socialist and an opponent of racist and ethnic prejudice. His stories were much influenced by Edgar Allan Poe, under whose spell Lovecraft had fallen in childhood. Next in importance was Lord Dunsany, the Anglo-Irish fantasist, whom Lovecraft once heard lecture in Boston. Third in order of influence was the Welsh fantasist Arthur Machen.

In 1918, Lovecraft took on the job of revising the prose and verse of his fellow amateur journalists. This ghost-writing remained his principal source of earned income. In 1921, he also began writing the stories of macabre fantasy for which he is remembered. When the pulp magazine Weird Tales was launched in 1923, it became his main fictional outlet.

During his last decade, Lovecraft lived quietly in Providence, writing and ghost-writing. He was no longer a recluse; friends often visited him, and he returned the visits on journeys to Boston, New York, and elsewhere. He became an enthusiastic tourist, traveling thrice to Florida, thrice to Quebec, and once to New Orleans. During these years, discouraged by adverse criticism, Lovecraft produced stories slowly, at a rate of little more than one a year. At the same time, the stories became longer, until some were short novels. In all, he produced just over 60 published tales.

Early Fables

Lovecraft's early stories, written from 1918 to 1924, were largely short fantasies. Some patently imitated Poe's ornate style; others imitated Dunsany. "The Cats of Ulthar" (1920) is a charming early example in fable form of the Lovecraftian way with the macabre:

It is said that in Ulthar, which lies beyond the river Skai, no man may kill a cat; and this I can verily believe as I gaze upon him who sitteth purring before the fire. For the cat is cryptic, and close to strange things which men cannot see. He is the soul of antique Aegyptus, and bearer of tales from forgotten cities in Meroe and Ophir. He is the kin of the jungle's lords, and heir to the secrets of hoary and sinister Africa. The Sphinx is his cousin, and he speaks her language; but he is more ancient than the Sphinx, and remembers that which she hath forgotten.

In Ulthar, before ever the burgesses forbade the killing of cats, there dwelt an old cotter and his wife who delighted to trap and slay the cats of their neighbors. Why they did this I know not; save that many hate the voice of the cat in the night, and take it ill that cats should run stealthily about yards and gardens at twilight. But whatever the reason, this old man and woman took pleasure in trapping and slaying every cat which came near to their hovel; and from some of the sounds heard after dark, many villagers fancied that the manner

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of slaying was exceedingly peculiar. But the villagers did not discuss such things with the old man and his wife; because of the habitual expression on the withered faces of the two, and because their cottage was so small and so darkly hidden under spreading oaks at the back of a neglected yard. In truth, much as the owners of cats hated these odd folk, they feared them more; and instead of berating them as brutal assassins, merely took care that no cherished pet or mouser should stray toward the remote hovel under the dark trees. When through some unavoidable oversight a cat was missed, and sounds heard after dark, the loser would lament impotently; or console himself by thanking Fate that it was not one of his children who had thus vanished. For the people of Ulthar were simple, and knew not whence it is all cats first came.

one day a caravan of strange wanderers from the South entered the narrow cobbled streets of Ulthar. Dark wanderers they were, and unlike the other roving folk who passed through the village twice every year. In the market-place they told fortunes for silver, and bought gay beads from the merchants. What was the land of these wanderers none could tell; but it was seen that they were given to strange prayers, and that they had painted on the sides of their wagons strange figures with human bodies and the heads of cats, hawks, rams and lions. And the leader of the caravan wore a headdress with two horns and a curious disk between the horns.

There was in this singular caravan a little boy with no father or mother, but only a tiny black kitten to cherish. The plague had not been kind to him, yet had left him this small furry thing to mitigate his sorrow; and when one is very young, one can find great relief in the lively antics of a black kitten. So the boy whom the dark people called Menes smiled more often than he wept as he sat playing with his graceful kitten on the steps of an oddly painted wagon.

On the third morning of the wanderers' stay in Ulthar, Menes could not find his kitten; and as he sobbed aloud in the market-place certain villagers told him of the old man and his wife, and of sounds heard in the night. And when he heard these things his sobbing gave place to meditation, and finally to prayer. He stretched out his arms toward the sun and prayed in a tongue no villager could understand; though indeed the villagers did not try very hard to understand, since their attention was mostly taken up by the sky and the odd shapes the clouds were assuming....

The caravan departs. That night, all the cats of Ulthar disappear. Next day they are back, placid and well-fed. Of the old couple, all that remains is a pair of skeletons.

The Cthulhu Mythos

Besides such Dunsanian fantasies, Lovecraft also wrote conventional horror tales with a New England background, dream-narratives reminiscent of those of George MacDonald and Lewis Carroll, and about a dozen stories (mostly written in his later years) which modern critics class as stories of the "Cthulhu Mythos." "Cthulhu"—whose name first appears in the 1926 novelette, The Call of Cthulhu—is a

gelatinous monster, winged and squid-headed, who falls upon terrified castaways on an island raised from the Pacific sea-bed by seismic convulsion. These Cthulhu Mythos stories are not altogether consistent with one another, since Lovecraft never drew up a comprehensive plan for the tales. Nevertheless, the stories do have certain elements in common. They assume that a race of supernatural—or at least superhuman—powers, the Great Old Ones or Ancient Ones, ruled the earth before the rise of man. In some stories, the Old Ones are transcendental beings of quasi-divine powers; in others, they are visitors or invaders from another world. In some cases, they have been immobilized by impersonal cosmic forces; in others, they have been defeated, restrained or banished in struggles with other extraterrestrial beings.

The Ancient Ones, however, strive to resume their earthly dominion. Rash mortals tamper with the restraints upon the Great Old Ones, who thereupon begin terrifyingly to manifest themselves. Sometimes the Old Ones are vulnerable to magical spells, sometimes to more material weapons, and sometimes to nothing that men use against them.

Other elements of the Cthulhu stories include the imaginary town of Arkham, Massachusetts, with its Miskatonic University; and, in the library of that college, a book of portentous spells, the *Necronomicon*, composed by a mad Arabian poet about the year 700. Lovecraft's pseudo-scholarly allusions to this book were so convincing that bookstores and librarians were plagued by people demanding a copy and refusing to believe that it did not exist.

Lovecraft encouraged his fellow-writers to borrow his concepts, and he in turn borrowed theirs and added them to the Mythos. After his death, several writers composed Cthulhu Mythos stories of their own, as some still do.

The most active of these later Cthulhuvian writers was August Derleth. Using some fragments and notes left by Lovecraft, Derleth wrote several "posthumous collaborations" with Lovecraft. He also wrote original stories in the series. Derleth introduced considerable changes in Lovecraft's scheme. He even invented a class of benign entities, the Elder Gods, who take the side of mankind in its battles with the Great Old Ones.

Lovecraft's late stories are often considered his best. When he wrote them, he had assimilated the lessons of experience. He had gotten away from slavish imitation of Poe and Dunsany; he had learned to tighten his plots and to control the stylistic extravagance and wordiness of his earlier fiction.

Science Fiction and Fantasy

Fiction falls into two classes: realistic and imaginative. Realistic fiction consists of stories that might have happened about ordinary people acting in predictable ways, either in the present or in the known

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historical past. Imaginative fiction is the name given to stories that the reader knows could not have happened, because they contradict known facts or because they are laid in the future. One can divide imaginative fiction of the modern era into science fiction and fantasy. "Science fiction" refers to imaginative tales based upon a scientific or pseudo-scientific premise, such as travel in outer space, or the effect of a new invention or discovery, or events transpiring in the future. "Fantasy" may be taken to mean stories based upon a supernatural assumption, such as the existence of gods, demons, elves, or other supernatural beings. Science fiction has been traced back to classical writers like Aristophanes and Plato; fantasy, to the myths and legends of ancient and primitive peoples.

There is no sharp dividing line between science fiction and fantasy; many stories fall on the boundary. Lovecraft's Dunsanian stories are certainly fantasies. Of his later tales, some are fantasies, some are science fiction, and some combine elements of both classes.

In Lovecraft's Cthulhu Mythos stories, the Ancient Ones are sometimes called "gods." But these are not "gods" in the traditional religious sense, like Zeus or Yahveh, concerned with the morals and manners of men. They do not reward the good and punish the wicked. Their powers, while vast, are ruled by natural laws. They are absorbed in their own affairs and are uninterested in the petty concerns of men. They have no more compunction about destroying men who get in their way than men have about killing mice.

This fictional outlook has been called the "mechanistic supernatural." It presents a cosmos which, while inhabited by superhuman entities, is basically amoral, merciless, and indifferent to man's fate. The contemporary writer Fritz Leiber defines Lovecraft's innovative role as follows:

Perhaps Lovecraft's most important single contribution was the adaptation of science-fiction material to the purpose of supernatural horror. The decline of at least naive belief in Christian theology, resulting in an immense loss of prestige for Satan and his hosts, left the emotion of supernatural fear swinging around loose, without any well-recognized object. Lovecraft took up this loose end and tied it to the unknown but possible denizens of other planets and regions beyond the space-time continuum. This adaptation was subtly gradual. At first he mingled science-fiction with traditional sorcery. For example in The Dunwich Horror, the hybrid other-dimensional entity is exorcised by recitation of a magical formula, and magical ritual plays a considerable part in the story. But in The Whisperer in Darkness, The Shadow Out of Time, and At the Mountains of Madness, supernatural horror is evoked almost entirely by recital of the doings of alien cosmic entities, and the books of sorcerous material have become merely the distorted, but realistic, histories of such entities, especially with regard to their past and future sojourns on earth.

Both by his writings and by his influence on younger colleagues, Lovecraft played a significant part in the revival of fantasy that took place in the 1960's.

Lovecraft's imaginative powers make his stories absorbing despite, rather than because of, their style. Typically, Lovecraft began his stories with rambling, leisurely, philosophical openings. "Arthur Jermyn" begins:

Life is a hideous thing, and from the background behind what we know of it peer demoniacal hints of truth which make it sometimes a thousandfold more hideous. Science, already oppressive with its shocking revelations, will perhaps be the ultimate exterminator of our human species—if separate species we be—for its reserve of unguessed horrors could never be borne by mortal brains if loosed upon the world. If we knew what we are, we should do as Sir Arthur Jermyn did; and Arthur Jermyn soaked himself in oil and set fire to his clothing one night. No one placed the charred fragments in an urn or set up a memorial to him who had been; for certain papers and a certain boxed object were found which made men wish to forget. Some who knew him do not admit that he ever existed.

Lovecraft's 60-odd professionally published stories fall into several classes. There are the Dunsanian fantansies, the dream-narratives, the stories of New England horror, the Cthulhu Mythos stories, and several tales that are *sui generis*. Several use the theme of the ghoul-changeling; several others, that of psychic possession. In the earlier stories, the conflict is between good and evil. In the later tales, Lovecraft's aliens are no longer good or evil in any human, moralistic sense; they are merely self-interested, like other non-human organisms.

Lovecraft was a very large frog in a very small puddle, the subgenre of the macabre imaginative tale. If one agrees that there is nothing beneath dignity about imaginative fiction in general and about macabre fantasy in particular, there is no reason not to consider a good writer in this field as worthy as a good writer in any other.

Lovecraft wrote in a style that was in vogue in the Romantic Era, roughly 1790 to 1840, and was much used by Poe and his Gothic predecessors. It is in disfavor today; but fashions change, and some day it may regain its popularity. It takes a little more effort to read this style with enjoyment, just as it does to read the archaistic prose of William Morris, than it does to read a work in a brisk, terse contemporary idiom. But many find the effort worthwhile. Despite his florid and leisurely style, Lovecraft can be read with much pleasure.

Some of Lovecraft's early stories, such as the "Herbert West" series, are deplorable by almost any standard. But Lovecraft steadily improved and in his later tales he proved himself, for all his stylistic oddities, a master storyteller. As the late Bernard De Voto once said, the essential quality of a good storyteller is neither accurate observation,

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nor warm human sympathy, nor technical polish, nor ingenuity in plotting, helpful as all these may be. It is a certain vividness of imagination, enabling the writer to grip the reader's attention and sustain it to the end. This Lovecraft had.

Some enthusiasts have gone overboard in calling Lovecraft one of the greatest writers of all time. I do not expect, in the foreseeable future, to see him widely ranked with Homer, Shakespeare, and Tolstoy. But he may well overtake Poe. Poe worked in more different genres than Lovecraft—he practically invented the detective story—and his influence spread further than Lovecraft's is ever likely to do. Still, in the field that Lovecraft made peculiarly his own, I think he stands on a level with Poe or even a shade above. His Cthulhu Mythos is an imaginative creation ranking with Lewis Carroll's Wonderland, Burroughs' Mars, Baum's Oz, and Tolkien's Middle Earth. By putting his own neuroses and nightmares into fictional form, Lovecraft prodded sensitive spots in his readers' psyches. He exerted wide influence among writers in his genre. He turned out spine-chilling tales that provide first-rate entertainment; and that, after all, is the prime test of any popular fiction.



TWO APPROACHES TO DEVELOPMENT

By Stephen S. Rosenfeld

The following review of two perspectives on the value of foreign assistance programs was written by a member of the editorial page staff of The Washington Post. It first appeared in Book World.

One Hundred Countries, Two Billion People: The Dimensions of Development. By Robert S. McNamara. New York: Praeger. 140 pp.

We Don't Know How: An Independent Audit of What They Call Success in Foreign Assistance. By William and Elizabeth Paddock. Ames: Iowa State University Press. 331 pp.

The problems of development are three and can be simply put. The first is to make available the necessary resources, the second is to put them to good use, and the third is to spread the word of their good use in order to counter the widespread impression that real development is not taking place.

Well, is it? Robert McNamara now runs the World Bank, the single largest source of development capital and advice. As much publicist and politician as banker and planner, he has here collected in edited form ten or so of the speeches which he gave in his first five-year term to build up moral and political and popular support behind more generous lending by the rich, and more efficient economic development by the poor.

In mustering data and fervor for his cause, McNamara is without compare. He has ability, passion, faith. To him, all problems are soluble, if the right political conditions, economic policies and technological advances are put in place. Only occasionally, as in a comment on rural development, will he concede that "we are still feeling our way." Difficult as it may be to implement, he has come down hard on the strategy that development must move beyond "growth" to "distribution": its benefits must begin to touch the lives of the masses.

McNamara works and lives at the summit. He deals in big round numbers (One Hundred Countries, Two Billion People). He is an organizer of the work of others. He must spend most of his time with other bankers, politicians, economists, and members of his staff.

A Skeptical View

The Paddocks' approach could not differ more. William, an Iowa State University agriculturalist who with his brother, Paul, wrote a study of the world food problem called Famine 1975, has teamed up with his wife, Elizabeth, to write We Don't Know How. They went out to the field, mostly in Latin America, looking deliberately for the successes in development. They claim they were not crusading for a cause or expounding a theory; they were not sponsored by an agency or foundation involved in development; they were experienced

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enough to ask hard questions and to evaluate skeptically the answers.

The subtitle of their devastating if necessarily selective report correctly suggests that they returned from their year-long 25,000-mile quest thoroughly disillusioned. Just about every time the Paddocks looked at a project, they found it had been oversold or crudely implemented by the aid donors and planners, and had fallen victim to donor inconstancy, local tradition and local poverty, and hard reality. The authors, for example, inspected the vaunted Rockefeller research program in Mexico, whose chief, Dr. Norman Borlaug, won a Nobel Prize in 1970 for fostering the "Green Revolution," especially in wheat. Based on their observations the Paddocks argue that the experimental centers had turned too little of their attention to the chief Mexican crop, corn; that acreage expansion, irrigation, fertilizer and price supports, rather than the development of high-yield wheat strains, may have accounted for most of Mexico's growth in both wheat and corn production; and that national "selfsufficiency" in wheat appeared at least. partially to have been obtained by pricing it out of the reach of many would-be consumers.

Basic Agreement

It was the purpose of this review to hold up McNamara and the Paddocks to each other: the one looking at the big picture, the other at the detail; the one reading the studies, the other looking at the ground; the one theorizing eagerly on development, the other reporting how painful the reality is; the one upholding the enlightened "estab-

lishment" responsibility to do something for the world poor, the other accepting an enlightened individual responsibility to deliver an honest report; the one saying we do know how, the other contending we don't.

The irony is that so far as their analysis of development goes, Mc-Namara and the Paddocks are probably a good deal closer on basics than a discussion of their respective books and situations might indicate.

For McNamara's signal achievement at the World Bank has been to try to focus the international development community on the need to see development in terms of people rather than numbers, of living and working standards rather than projects and programs, of social justice rather than straight growth. The very inadequacy of so many foreign-supported efforts, however well intentioned and well funded, to improve appreciably the lot of the people at the bottom is precisely the problem McNamara has striven to confront at the bank.

The Paddocks say we should stop trying to cure others' ills until we learn how to cure our own. Their humility may well be more in step with the current American mood than is McNamara's call to action. But what is a tidy conclusion for a book by a pair of honest experts is an impossible premise for a policy addressing the fact of global misery.

McNamara is convinced—and I think he's right—that the world's poor cannot await the perfection of methods intended to help them. The incisive insights of people like the Paddocks are starting to be incorporated in the lending and advising of the World Bank and some other

development operations. What is needed, in addition to such reforms in method, is a greater allocation of the rich nations' wealth to the developing nations, even if the portion now allocated is not yet spent as wisely as McNamara and the Paddocks desperately hope it will be.

THE SPUR TO INNOVATION

By Irving Kristol

The reviewer is professor of urban values at New York University and the author of On the Democratic Idea in America. His review is reprinted from Fortune magazine.

Invention and Economic Growth. By Jacob Schmookler. Harvard University Press. 332 pp.

The importance of technological innovation for economic growth is one of the few matters in this world that can be said to be beyond dispute among economists. Without technological innovation, economic growth has a predetermined ceiling. To be sure, this ceiling might be fairly high in under-developed and less-developed countries, where the diffusion of old technologies can have dramatic effects-witness the economic history of Japan in the 20th century. Nevertheless, at some point a non-innovative society will find its per capita income leveling off.

But while they are agreed upon and emphatic about its importance, economists have been curiously vague about the *sources* of innovation. Under what conditions does it thrive? Why Copyright by Time, Inc.

do some societies innovate more than others? And within particular societies, why do some industries appear to generate new technologies effortlessly, while others stand pat for decades?

Economists' vagueness about such matters seems to be related to the assumption-widespread among themthat these questions are not really within the purview of economics at all. They habitually assign them to sociology, or psychology, or anthropology, or to the history of scientific ideas. Economists, that is to say, have tended to take it for granted that technological innovation is "exogenous," that it impinges on the economy from the outside, that it is a non-economic factor despite its vivid economic consequences. "For some economists," according to Jacob Schmookler, himself a professor of economics at the University of Minnesota, "this assumption is only a methodological convenience; for others, it is a matter of conviction. But few have given the question serious thought."

Professor Schmookler is one of these few. For more than a decade now he has been investigating the subject, and now, summarized in a learned tome, his findings are as surprising as they are thought-provoking.

False Truisms

Schmookler argues powerfully against the notion—widely accepted by scholars as well as laymen—that inventions follow naturally in the wake of major scientific discoveries. The thought underlying this notion seems to be that scientific advances in turn suggest the possibility of inventions—i.e., of new ways of doing things—and this possibility captures the imagination of potential inventors, who happily convert scientific discovery into technological innovation.

The whole procedure has the automatic quality of a dream (or, if you don't like progress, of a nightmare). The general literature on the subject is studded with analogies between the growth of science and technology on the one hand, and the growth of money at compound interest on the other. "Everyone knows" that science grows at an exponential rate; it is therefore clear that technological innovation is an ineluctably accelerating process. The only trouble is, as Schmookler demonstrates, that "few ideas have proved so intuitively attractive with so little foundation in either logic or evidence."

Schmookler put a team of researchers to work studying important inventions in four industries—agriculture; petroleum refining, papermaking, and railroading—during the period 1800-1957. Digging into the circumstances out of which these inventions emerged, as described by the inventors themselves, they discovered that "in no single instance is a scientific discovery specified as the factor initiating an

important invention in any of these four industries When the inventions themselves are examined in their historical context, in most instances either the inventions contain no identifiable scientific component, or the science they embody is at least 20 years old."

Invention by Demand

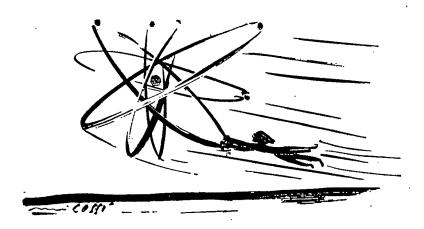
But what, then, is the spur to technological innovation? Schmookler's answer is quite simple (though the arguments in support of it are statistically elaborate): inventions are mainly "demand-induced" rather than "knowledge-induced"—most inventions are stimulated by a technical opportunity that is also an opportunity to serve a market (present or potential) at a profit.

This may sound crude or even vulgar. But that is because we have such a romantic conception of what an invention is. The term suggests to us a radical breakthrough, a big change, a marvelous new idea incarnated in a completely novel product. But most inventions are not of this order at all. just as the average inventor is not an Edison or an Orville Wright. Most inventions represent minor but noteworthy improvements to an existing product, and it is the sum of these thousands of improvements-most of which escape our attention—that results in a technologically innovative economy. And the overwhelming majority of inventions are made by men "on the job," who perceive the possibility of improving in some relatively small way upon a process or product they are familiar with. It is this sort of thing that is the bread and butter of economic growth. The isolated, dreaming inventor-genius supplies the jam—for which, of course, we must forever be grateful to him.

To say that technological innovation is induced by a market that holds out the promise of material reward, is not to say that the inventor himself need be an "economic man." He usually is, in fact; but he also may be only a tinkerer, or even a "nut." Nevertheless, unless there are economic men around him—men with a roving, entrepreneurial eye for a potential market—his invention will rust away in the garage. Thomas Edison himself was a thoroughly market-oriented inventor.

Professor Schmookler, in the course of his study, explores many interesting implications of his thesis. He points out that the level of invention is not always higher in industries with more employees around to think up things; that marginal improvements in large industries may be economically more important than major breakthroughs in small industries, because these are growth industries in which demand is strong; and much else as well.

He does not address himself to some of the more general questions that come to mind. Is there a special relationship between economic growth and the free market, or is it possible for government artificially to create demand and the technological innovation that goes with it? Is the large corporation with a dominant share of the market especially good at technological innovation or peculiarly inept at it? One would like to know the answers to questions such as these; and one hopes that there is sufficient demand within the economic profession to spur economists on to further development of Schmookler's fascinating innovation in the theory of economic growth.



WHITHER RELIGION?

By Daniel Callahan

The reviewer is director of the Institute of Society, Ethics and the Life Sciences at Hastings-on-Hudson, New York. He has taught theology at several universities and is the author of The New Church and co-editor of Christianity Divided: Protestant and Roman Catholic Theological Issues. His review is abridged from The New Republic.

The New Agenda. By Andrew Greeley. New York: Doubleday. 312 pp. The Fire We Can Light. By Martin E. Marty. New York: Doubleday. 240 pp.

Over the years Andrew Greeley and Martin E. Marty-both professors at the University of Chicago—have established themselves as two of the most astute observers of the increasingly confusing religious scene. Greeley (Jesuit priest and sociologist) has long warred with the liberal intellectual establishment, which claimed that secularism was consuming the flesh of traditional belief, leaving only the skeleton of religious man. Greeley earlier in his career countered with sociological data, showing that the pessimism of the theological doomsayers could find little support in the practices and beliefs of the common man, still faithful, still believing.

More recently—as the data on traditional beliefs, church attendance and respect for religious authority pointed to some significant signs of decline—Greeley has moved the argument to a different plane. He now Copyright of 1973, Harrison-Blaine of New Jersey, Inc.

contends that the recent outbursts of evangelistic fervor, Eastern religion, and the cults of sensitivity and self-realization prove the enduring grip of religion, however odd the forms it may have at present. He has hacked away at both the right and the left in the high places of American religion, the former for its intransigence, the latter for its faddish embrace of whatever the general culture says is "relevant" from one year to the next.

Martin E. Marty (Lutheran minister and church historian) is far less pugnacious, more prone to bemusement than indignation, to a historical rather than sociological approach. He has usually come to less harsh, less villain-ridden judgments of why the churches have had their ups and downs, mainly downs, of late. In The Fire We Can Light, his bemusement centers on the pronounced drift toward conservatism, religious particularism, and a "suddenly attractive" spiritual emphasis. That much of this mirrors the national mood, with its mix of countercultural privatism and political conservatism, is evident enough. But if these very general parallels can be supported, the present situation is more complex when the details are observed, particularly those pointing to future directions:

Tomorrow's religion and tomorrow's Christianity in America will be both more expansive and more constrictive, more pluralist and more sectarian, more sprawling and more rigidly defined. This will be the case because

the population that is seeking religious answers is itself divided about the opposed and contradictory tendencies.

Marty offers comparatively little advice to the churches in dealing with the confusion, though he approves the swing back to spirituality and to the focus on local neighborhood congregations. The question is whether this trend and others can be saved from (even as it reflects) a general societal stagnation, one which has seen a compulsion to find "ballast" in the midst of constant, excessive change.

Institutional Erosion

Where Marty offers little advice and mild curatives, Greeley presses a "new agenda" on the churches, particularly the Catholic Church. The optimism of his earlier writing has now largely disappeared. Though religionin-general will survive, in his viewsince human beings cannot do without systems of ultimate meaning and value—the powerful and unique place of traditional religions in the West probably will not. While he touches very little on American Protestantism, his implicit judgment is that this fate has already befallen the churches of the Reformation. Now it is the turn of Catholicism, once the most solid structure of all: "For the rest of our lives American Catholicism will erode until it becomes quite indistinguishable from any other American denomination."

Greeley's "new agenda" is not meant to counter this erosion immediately. Instead it is aimed at establishing a more solid basis for future generations to work with. It will not be popular, he says, and no doubt will prove offensive at first to all but a sober few, those who know that "urgency, passion and enthusiasm are no substitute for precision, discipline, intelligence and realistic analysis." Presumably those who fail to be drawn to the "new agenda" will be lacking in those estimable virtues.

The key to Greeley's approach lies in adopting the common view of most sociologists of religion, and many historians of religion as well, that religion is essentially a system of symbols, designed to provide a psychological context for human life. The historical Christian symbols, in their literal and rationalistic meanings, have lost much of their force, even for those who are professed believers. "The question," Greeley says, "is whether we will be able to interpret them. If we cannot, we are doomed to live our lives in religious and moral chaos and confusion."

Agendas and Visions

The "we" in that quotation bears examination. As the book makes clear, it is not addressed to those who wonder whether they should be Christians in the first place. The "new agenda" is really a fresh apologetic, aimed at those who want to hang on to their faith but are aware (though maybe not well aware) that too much history has happened, too much damaging biblical criticism has appeared, and too much scandal has taken place, to make that old unquestioning faith a viable option much longer. By not offering extravagant hopes for the "new agenda," Greeley provides protection against quick disillusionment; and by not guaranteeing that the venture can succeed at all, he holds out a final, saving uncertainty.

The American Review

At the end of his book, Marty also calls on Christians to begin a new search for the "core" of Christianity. He wants a "new vision" and a "new consciousness" which discriminatingly builds upon old beliefs and traditions but carries them forward in fresh developments. I suppose that kind of wish is true of half the human race

these days, whatever their old beliefs and traditions. Greeley and Marty are probably right that religion is not dead, at least if religion is construed not in terms of any particular belief or church, but simply as a way of looking at the world and human experience as a whole.

A POETRY OF DARK WOODS

By Patrick Keane

Patrick Keane teaches literature at Skidmore College in upstate New York. His review is abridged from The New Republic.

The Avenue Bearing the Initial of Christ into the New World: Poems 1946-64. By Galway Kinnell. New York: Houghton-Mifflin. 177 pp.

In the decade and a half since his first book appeared, Galway Kinnell has emerged as one of the most powerful and moving poets of his generation. His is an elementary poetry—a poetry of dark woods and snow; of wind and fire and stars; of bone and blood. His subjects are perennial: love illumined and made more precious by the omnipresence of death. He said recently:

It is through something radiant in our lives that we have been able to dream of paradise, that we have been able to invent the realm of eternity. But there is another kind of glory in our lives that derives precisely from our inability to

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enter that paradise or to experience eternity. That we last only for a time, that we know this, radiates a thrilling, tragic light on all our loves, all our relationships, even on those moments when the world, through its poetry, becomes almost capable of surprising time and death.

Almost; for Kinnell has posed the most anguished of all our questions: "Is it true/the earth is all there is, and the earth does not last?" If it does not, it can still be irradiated and somehow made sacred, if not by God then by the poet.

Galway Kinnell is best known for his more recent collections, Body Rags (1968) and The Book of Nightmares (1971). The two volumes preceding these, What a Kingdom It Was (1960) and Flower Herding on Mount Monadnock (1964), are now brought together in this new volume. The remarkable title derives from the no less remarkable, life-charged poem in which Kinnell, back in 1960, celebrated New York City's teeming Avenue C. The theme of Christ's symbolic presence is continued in "To Christ Our Lord,"

where a boy reluctantly eats for Christmas dinner the bird he killed earlier in the day. The sound of its wing-beat "had stirred his love," yet he fired. "Now the grace praised his wicked act." Yet "he ate as he had killed, with wonder." The poem began in snow ("The legs of the elk punctured the snow's crust....") and ends there:

At night on snowshoes on the drifting field

He wondered again, for whom had love stirred?

The stars glittered on the snow and nothing answered.

Then the Swan spread her wings, cross of the cold north,

The pattern and mirror of the acts of earth.

The movement and structure of this early poem are typical of much of the best of Kinnell's work: the rondure, or reversion of a poem's end upon its beginning; the movement from a closely observed particular to the ("almost") transcendent emblem. If there are moments when we feel that the things of this world have been too quickly transformed to emblems, we have those other poems in which Kinnell's eye is glued to the particular. The most famous instance is the "Avenue C," with its plethora of people, vegetables, rust-water icicles, storefronts and bedbugged mattresses.

In Kinnell's moving elegy for his brother Derry, we have another saprophytic blossoming, moving from the dead cow and dung that make grass green to the "grass for a man," and on to a peroration reminiscent, and worthy, of Yeats: It is true

That only flesh dies, and spirit flowers without stop

For men, cows, dung, for all dead things; and it is good, yes—

But an incarnation is in particular flesh

And the dust that is swirled into a shape

And crumbles and is swirled again had but one shape

That was this man. When he is dead the grass

Heals what he suffered, but he remains dead.

And the few who loved him know this until they die.

There is glory in Kinnell's best poetry, and the temptation (to paraphrase Coleridge in his lecture on Shakespeare's *The Tempest*) is to stop reviewing and simply recite. One last example. Here is the concluding section of the title poem from *Flower Herding on Mount Monadnock*, a movement illustrative of the pattern we've noted, and poetry almost as lucid and beautifully elegaic as Prospero's speech in *The Tempest*:

In the forest I discover a flower.
The invisible life of the thing
Goes up in flames that are invisible
Like cellophane burning in the
sunlight.

It burns up. Its drift is to be nothing. In its covertness it has a way
Of uttering itself in place of itself,
Its blossoms claim to float in the
Empyrean,

A wrathful presence on the blur of the ground.

The appeal to heaven breaks off. The petals begin to fall, in self-forgiveness.

It is a flower. On this mountainside it is dying.

THE WORLD FOOD CRISIS

By Jean Mayer

The reviewer is professor of nutrition at Harvard University and has served as advisor to the United Nations and the U.S. government. His review is abridged from The New York Times Book Review.

By Bread Alone. By Lester R. Brown with Erik P. Eckholm. New York: Praeger Publishers. 272 pp.

There probably has not been a single year in recorded history where food shortages and famines have not occurred somewhere in the world. Droughts, great natural catastrophes, locusts and blights, wars and civil disorders have been and will continue to be major causes of mass starvation. But even in the face of this melancholy record, 1972 stands as a landmark: crops failed or were inadequate in several major subcontinental areas: the Soviet Union, China, the Indian peninsula, the African Sahel.

The following year, 1973, O.P.E.C. (Organization of Petroleum Exporting Countries) twice doubled the price of oil at the well head, putting power and fertilizers out of reach of poor farmers everywhere. An adequate but not a record crop, while it did not make the situation worse, failed to reconstitute the world's grain reserves, which had fallen to the lowest level since World War II.

The result is all too well known. The world price of a bushel of wheat, like that of a barrel of oil, had ranged from 1960 to 1972 from \$1.35 to slightly over \$2. In late 1973, the price of wheat

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soared past \$5. For a brief period, it was possible to exchange one bushel of wheat for two barrels of oil. Then, at Christmastime in 1973, came the second doubling of the price of oil, bringing it above that of wheat to \$8 per barrel. The price of wheat, and even more dramatically of rice, took off again. The race between these prices is still on, with the poor losing everywhere and with entire geographic areas—Central Africa, Eastern and Southern India—threatened by large-scale famines.

Causes of Imbalance

Lester Brown's newest book, By Bread Alone, extends and deepens the analysis first undertaken in earlier books and recent articles, both with regard to the causes of the present disequilibrium and the most likely methods to right the balance between food production and consumption. (Formerly a Senior Fellow with the Overseas Development Council, Dr. Brown is now president of Worldwatch Institute in Washington.)

Causes of imbalance are, in order:

- the continued increase in the world's population;
- the fact that increases in production have taken place, so far, primarily in rich countries;
- the fact that in rich countries whether exporters (United States, Canada, Australia, to a far lesser extent France and Argentina) or importers (the rest of Western Europe, Eastern Europe, Russia, Ja-

pan)—an enormous appetite for animal products has forced the conversion (at a very poor rate) of more and more grain, soybean and even fish meal into feed for cattle, hogs and poultry, thus decreasing the amounts of food directly available for direct consumption by the poor;

- the progressive destruction of the productive capacity of certain large agricultural areas due to unwise land management policies;
- the decline in the world fish catch, due to overfishing and perhaps pollution as well;
- and the complexity and resultant slowness of agricultural development.

The "Green Revolution"

The "Green Revolution" involves not only the replacement of traditional varieties of grain by new strains which give high yields if enough fertilizers and water are also available. But it also requires the provision of these inputs, plus that of the herbicides needed as a result of a corresponding stimulation of the growth of weeds. It implies the availability of silos and pesticides needed to make sure that the increased harvest is not wasted. The Green Revolution is dependent on power to operate the irrigation system and to dry the crops (new varieties have a higher moisture content and on fuel and trucks for the transport of agricultural chemicals and crops. It is impossible without a credit system to finance the new inputs, and without an agricultural extension system to educate the farmer to use them. To provide all these inputs and

services simultaneously is a complicated, expensive, and difficult task. It has been done—in the Indian Punjab, in Taiwan, in South Korea, in China, in Mexico, Brazil and Colombia. But it takes resources—and time.

Brown discusses lucidly and in the necessary detail the main measures that should be taken immediately to improve the world food situation:

- a shift in consumption in developed countries toward a "simplified" diet containing less animal products and, in particular, less meat:
- massive investment in food production mostly from conventional
 —agricultural— sources and increasingly from nonconventional sources such as a single cell protein;
- a "people oriented" development strategy which not only increases agricultural and industrial production, but does so by involving the maximum possible number of workers (rather than through Western-oriented, labor-saving technology);
- and a much greater effort to reach all segments of the population with free, acceptable birth control methods.

Nutritional Solutions

As a nutritionist, I wish at least mention had also been made of some of the surviving nutrient deficiencies, the cure for which is less dependent on increased production than on energetic measures by health departments. For example, throughout the Middle East and the Indian subcontinent, tens of thousands of youngsters are blind as result of vitamin A deficiency,

which could be avoided by the administration of one massive dose (200,000 international units) of vitamin A per child twice a year. Throughout the world, notably in the Himalayan regions and in Latin America, millions of persons present cases of. clinical or subclinical goiter which would be eliminated by simple fortification of the salt with iodine.

But these are the minor limitations of a work that is a major contribution to our understanding of the central problem of this decade. Intelligent people throughout the world should read this book, discuss it, and put pressure on politicians to act on its conclusions.





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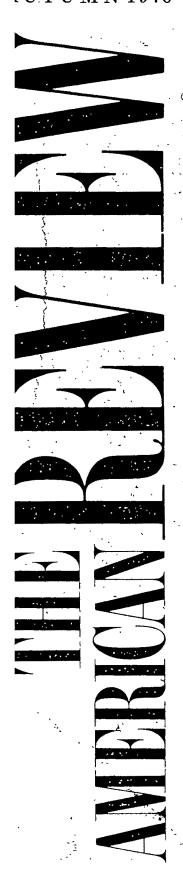
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- "Chess and Bobby Fischer" by Harold C. Schonberg
- "The Public Purpose of Economics" by John Kenneth Galbraith
- "Tradition in Science" by Werner Heisenberg
- "Does Literature Have a Future?" by Norman Podhoretz
- "Homage to Duke Ellington" by Ralph Ellison
- "A Race Against Time" by Robert S. McNamara
- "The Poet, the Self and Nature" by Joyce Carol Oates
- "What Is a Painting?" by Michael Polanyi
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BOOK REVIEWS

Liberty, Property, and the State A New View of Slavery The Impact of Modernization Celebrating the American Past

A NOTE TO THE READER

mericans have always been interested in explaining themselves, defining themselves, to themselves and to the world; their strengths, their failings, their history, ideas, sentiments. Hence, the high development in the United States of the discipline of sociology and the early acceptance of the practice of psychoanalysis.

The year 1976 marks two hundred years since the American Declaration of Independence from British colonial rule. Inevitably, the memorial year is witnessing an outpouring of self-evaluations. In this issue, a distinguished scientific immigrant from France, René Dubos, describes in personal terms what he has discovered to be unique in the country of his adoption—primarily mobility and a highly-developed exploratory instinct. Social historian Daniel Boorstin reports in fascinating detail how the large-scale production of ready-made clothing of quality spread the democratic idea from the United States to the rest of the world. A student of world religions, Robert N. Bellah, distinguishes the religious ideas sanctioned in the United States from an unacceptable state-related religious establishment. Ray Billington, noted for his lively interest in the American West, reports on the persistence of the frontier image of America throughout the world—or rather, the two contrary images of the Land of Promise.

Similarly, literary critic Irving Howe traces the conflict between utopian and pragmatic elements in American literature; and the cultural historian, Henry S. Commager, with a wealth of reference and allusion, places the American Revolution within the eighteenth century Enlightenment movement—not as a special case, but as the solid, careful institutionalization of the ideas of the Age of Reason.

Elsewhere in this issue are articles on a contemporary composer (George Crumb) and artist (Red Grooms, with illustrations); of particular interest to many readers will be an article on the prospects for American foreign policy after Vietnam and the Yom Kippur War of 1973 written by a knowledgeable political scientist, Samuel P. Huntington.

J.S.

BEYOND ISOLATIONISM

By Samuel P. Huntington



The American experience in Indochina and the consequences of the Mideast War of 1973 have brought evident changes in world politics. There is much talk abroad about a possible withdrawal in American foreign policy to a policy of isolationism. An authority on international affairs analyzes the commitments and constraints on U.S. foreign policy — and gives five reasons why it will avoid the extremes of both isolationism and interventionism.

Samuel P. Huntington is professor of government in Harvard University's Center for International Affairs and editor of the magazine Foreign Policy. He is the author of many books, including The Soldier and the State and Political Order in Changing Societies, and editor of Authoritarian Politics in Modern Society.

both symbolically and literally the end of an era in American foreign policy, clearing the way for a reconsideration of the American role in the world, free from the preoccupations and animosities of the past. The Vietnam imbroglio was the high point of a policy which for two decades involved the United States in active intervention in various areas of the world in order to counter what were perceived as Communist threats to American security, and to promote patterns of economic and political development congenial to American interests. With the end of that period, the question now is: What will be the main thrust of American policy in the coming years? Is the United States likely to return to a late-twentieth century version of isolationism? Or can the United States define a role for itself in world affairs that will avoid the extremes of isolationism, on the one hand, and interventionism, on the other?

The history of American foreign policy has often been interpreted precisely in terms of an alternation between these two poles. The familiar picture is one of a nation that followed an isolationist path through most of the nineteenth century. In the 1890s, however, the United States swung over to the other extreme, to become an eager, if tardy, participant in the competition for empire, and to play an active role in world politics, culminating in American intervention in World War I. This was then followed by rejection of the League of



Nations and a political and economic isolationism that only ended with the rise of the Axis threat at the end of the 1930s. U.S. involvement in World War II, in turn, marked the beginning of another and even more extreme interventionist surge that led to the expansion of U.S. economic, political, and military influence in Europe, the Mediterranean, and East Asia. The isolationism of the nineteenth century or even of the 1920s obviously cannot be duplicated today. Yet it is, nonetheless, now argued that the American people have become dismayed by the fruitless sacrifices of an unwinnable war, are weary of the burdens of leadership, preoccupied with domestic, social, and economic problems, and repelled by the immorality and cynicism that seem to be inherent in an activist foreign policy. Among American allies, this prospect of an America "turning inward" arouses alarm about the reliability of U.S. treaty commitments. Much of this alarm is, I believe, unfounded and based on a misreading of American public opinion. Yet some constraints, mostly of a political nature, do exist. It is most important that both the allies of the United States and its potential opponents understand the scope and the limits of these constraints. Five factors are, perhaps, particularly worthy of attention.

Public Opinion

One clear lesson of the 1960s is that no government in the United States can long follow a foreign policy that does not have substantial public support. The argument that U.S. military commitments have lost credibility is, as a result, often supported by reference to public opinion surveys that on the surface would appear to reveal the existence of substantial isolationist sentiments. In 1964, for instance, 8 percent of the American public could be classed as "total isolationists," while 65 percent were identified as "total internationalists." By 1974, the number of total isolationists had risen to 21 percent of the public, and the number of total internationalists had dropped to 41 percent.

These data on public opinion, however, are not terribly significant. In the first place, the figures themselves are susceptible to a variety of interpretations. While obviously isolationist sentiment is more prevalent now than it was in the 1960s, one could say that, given the foreign policy traumas which the United States has suffered during the past twenty years, it is indeed surprising that in 1974 the number of "total internationalists" in the American population still outnumbered the "total isolationists" by two to one. Even in a year of severe economic recession, 80 percent of the American public were unwilling to accept the isolationist panacea.

Secondly, the willingness of the American public to use U.S. troops to defend other countries has not in fact changed markedly in recent

years. In 1969, for instance, 38 percent of the American public favored the use of force if West Germany were invaded; in 1974, 39 percent favored the use of U.S. troops if Western Europe were invaded. The figures for West Berlin were 26 percent in 1969, 34 percent in 1974; those for Taiwan, 26 percent in 1969, 17 percent in 1974. In over five years, in short, the willingness of the American public to use U.S. troops in the defense of foreign countries shifted up or down a bit in the case of individual countries, but did not change very substantially on an overall basis.

Thirdly, polls such as these, posing hypothetical questions in the abstract, are not in themselves very meaningful. What is decisive is public opinion when the event happens, and that will be shaped by the circumstances of the event and by the leadership of the President. An attack in Western Europe or in Korea cannot help but engage U.S. troops, and it is inconceivable that American public opinion would not overwhelmingly support U.S. military action under these circumstances. Even in an event such as a Soviet invasion of Yugoslavia (to which 15 percent of the public in 1969 and 11 percent in 1974 would respond in the abstract with U.S. troops), in a country where the United States has no diplomatic or military commitment, strong leadership by the President, pointing to the effects of the invasion on Italy, Greece, Israel, and the U.S. position in the Mediterranean generally, could produce a dramatic swing in support of U.S. counteraction. In the absence of a crisis, public opinion on issues of this sort is both superficial and unstable. It is not necessarily a major constraint on the freedom of action of the President and Congress.

In this connection, it is interesting to note the shift of opinion, within a few months, in Congress on military spending. In January 1975, a National Broadcasting Corporation poll showed that 262 representatives and 63 senators in the new Congress (as opposed to 231 representatives and 60 senators in the old) were in favor of reducing military spending. Yet the Communist victory in Vietnam, the Mayaguez incident, and other events (such as the recession) produced stronger congressional support for military spending — and for overseas military deployment — than in any other recent year.

Party Politics

A second line of argument casting doubt on the credibility of U.S. commitments focuses on the effects of party politics and particularly on electoral competition. These forces, it is said, encourage political leaders to avoid "hard" decisions, to limit the development of military capabilities, and to be anxious to achieve dramatic, but not very meaningful, diplomatic agreements at summit conferences.

At the same time, however, the operations of American domestic politics can also have quite the reverse effect. A President who has suffered a set-back in foreign policy or has made what appear to be major concessions to another state will normally be forced by the potential political consequences of these events to make sure that this "loss" is not repeated. In this respect, a dangerous gap can develop between the logic of international relations and the logic of domestic politics. The fact that a President has made concessions in one crisis may encourage the leaders of other states to think that he will also make concessions in the next crisis.

In reality, however, a President is likely to do exactly the reverse. Nikita Khrushchev's failure to understand this principle brought the world to the nuclear brink in 1962, when he apparently assumed that because President John F. Kennedy had not responded vigorously to the American fiasco of the Bay of Pigs or to Communist aggressiveness at the Berlin Wall, he would also not respond vigorously to the deployment of Soviet missiles in Cuba. In part because of these earlier events, however, Kennedy had no choice politically but to resort to military threats to compel the removal of the missiles.

Morality and Realism

Throughout its history, American foreign policy has been defined in terms of both security and power politics, on the one hand, and morality and ethical principles, on the other. In one way or another, the needs of both realism and idealism have had to be served. During, the Cold War years, these purposes tended to coincide. In simple balance-of-power terms, the Soviet Union was the only country which could be a significant threat to American interests. In terms of morality, the Soviet system and international communism generally were seen as embodying the antithesis of individual liberty, democratic government, and private enterprise. The Soviet system was simply another variant of the totalitarianism that we had fought a four-year war to eliminate in Germany and Japan. Since this system was as close to being a total evil as any politicaleconomic system could be, the United States, it was believed, was morally justified in helping any other countries threatened by international communism.

The dispersion of power on the international scene and the emergence of detente have, however, led to a frequent divorce between national interests conceived in terms of power and national interests conceived in terms of morality. The divorce, has, indeed, been a major feature of American foreign policy in recent years. Instead of reinforcing each other, security and morality now often conflict.

The considerations of morality, particularly in the form of human rights, usually dictate a much harsher line towards certain foreign governments than the security considerations might seem to warrant. Thus, the case for detente is now often made on security grounds, while the opposition to detente, from both the left and the right, highlights moral considerations.

An effective U.S foreign policy has to be grounded in considerations of both security and morality, and meaningful U.S. commitments have to be justifiable in terms of both. U.S. commitments to the North Atlantic Treaty Organization (NATO) and Japan clearly fall into this category, as does the U.S. commitment to Israel. Whether the Korean commitment does so also, will depend in large part on whether Americans are able to see significant differences in political liberty and individual rights between South Korea and North Korea.

Legislative-Executive Relations

In addition to being justifiable in terms of both morality and security, U.S. commitments now, along with much else in U.S. foreign policy, require the support of both Congress and the President. Under the U.S. Constitution, Congress has many important legal powers over foreign affairs, and through its general power, such as that of appropriations, can exercise additional influence. In the 1930s, Congress was a very important factor in the conduct of U.S. foreign relations. During the quarter century after World War II, however, Congress in effect delegated much of its control over foreign policy to the Executive. Congress is now actively reasserting its power. In this process, major collisions have occurred between the Executive and Congress, such as those involving the Jackson Amendment to the trade bill, which denies favored tariff status to nations that fail to allow unrestricted emigration to their citizens, and involving the suspension of military aid to Turkey. In addition, at the time of writing (1975), these two branches of government are controlled by different parties. But the problem would still exist even if both President and Congress were of the same party. Only rarely in the United States do policy cleavages coincide with party cleavages, and the ways in which a President or Congressional leaders can influence even the votes of members of their own party in Congress are limited.

The development of an effective foreign policy in the coming decade requires new forms of cooperation between the executive and legislative branches of the U.S. government. In the late 1940s, Président Harry S Truman was confronted with an opposition-controlled Congress, in which there was deep suspicion of him and his policies, irrespective of party. He made major efforts to involve congressional leaders in the formulation of policy, and the result was one of the most creative and productive periods in the history of

American foreign policy. Similar efforts are needed by the Executive today. Congress, however, must also recognize the limits of its competence and the extent to which the erratic and irresponsible exercise of congressional powers can severely damage the international influence of the United States. For the foreseeable future, however, a U.S. commitment is only viable if it has the support of Congress. Indeed, support in Congress may well be more meaningful than support in the Executive.

The Use of Force

In the future, the United States is likely to respond to challenges. to its "hard" commitments (i.e., commitments reflecting its interests and moral purposes and backed by both branches of government) in ways quite different from those which it might have used in the past. During the 1950s and 1960s, gradual response, flexible response, and limited war came to be the prevailing policy and doctrine. In the future, however, no President will wish to run the political risks of any sustained overseas limited engagement. Under the War Powers Act, indeed, it becomes legally difficult for a President to conduct a war for more than sixty days. In addition, the failure of the "compellance" strategies in Vietnam has reoriented U.S. military doctrine towards the more decisive use of force, including a renewed emphasis on the potential of tactical nuclear weapons. All these factors - legal, political, and military - mean that the U.S. response to a challenge to a "hard" commitment is likely to be immediate, overwhelming, and potentially devastating to the aggressor. The United States may be slower to resort to military force than it has been in the past; but when it does, it will be sure to apply sufficient force to achieve its objectives quickly and decisively. In this sense, future aggressors may well end up paying part of the cost of the failure of U.S. military policy in Vietnam.

While there will be considerable conflict and uncertainty until new patterns of response have been institutionalized, the political constraints that we have identified here suggest that in the coming years, the United States will be more selective in the commitments it undertakes, but that the commitments it does maintain will be at least as meaningful as they have been in the past. These commitments will be maintained if they serve the dual purposes of morality and security, and have the backing of both branches of government. When they do, any challenge to them is likely to be met by a massive military response. These political constraints insure that U.S. foreign policy will follow a course that is neither interventionist nor isolationist during the coming years.

The Idea of America 1776-1976

DISCOVERING AMERICA

By René Dubos

From its earliest beginnings, the United States has been a country of immigrants and their descendants. Here a distinguished immigrant from France draws on his own experience to suggest some of the aspects of life and culture that struck many new settlers as uniquely American. His article is reprinted from The American Scholar, where he writes a regular column entitled "The Despairing Optimist."

René Dubos was for many years professor of pathology and microbiology at Rockefeller University, and is now director of environmental studies at New York State University in Purchase. A leading researcher in the field of antibiotics and in the effects of environment on the young, he has won several awards for his scientific contributions. His books include So Human an Animal, which won the Pulitzer Prize, Man, Medicine and Environment, and most recently, Beast or Angel? Choices That Make Us Human.



he small numbers of Englishmen who founded the Virginia Company in 1607 and who landed on Plymouth Rock in 1620 have been followed by some forty-five million men, women and children who came from all over the world to settle in the United States. I am one of these old-fashioned immigrants, one of the Europeans for whom the simple phrase "the New World" acted as a catalyst that made me cross the Atlantic because it conjured up a land of absolute freedom and unlimited possibilities. I was twenty-three years old when I first landed in New York in October 1924—half a century ago. I had then no plan for the future, no job in view, not even a student visa, just the hope for adventure—any kind of adventure.

Although my life has long been completely identified with the American scene, intellectually and emotionally, I feel compelled at the end of these fifty years of residence to stand back and look at my adopted country as if I were a stranger — which obviously means

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that I am still somewhat of a stranger. I am even tempted now and then to engage in the game so popular among travelers and new settlers of defining what is American about America. But I shall limit myself to a few remarks concerning the urge that brought millions of people, including me, to the New World, and also concerning the differences that I still detect between Europe and the United States. More accurately, I shall take this half-century landmark as an excuse to speak about a few of my early American experiences.

I have often been asked, and ask myself even more often, why I left Europe with the definite intention of settling in the United States. While I cannot give a clear answer to this question, I know at least that my move was not motivated by the desire to escape from a hostile environment or from a difficult situation. I had received a fairly extensive and successful education in Paris and had worked happily for two years on the editorial staff of the International Institute of Agriculture in Rome. I loved the physical and human atmosphere of Western Europe and could have functioned in it successfully.

Europe's Utopian Dream

While growing up as a child in the French countryside, however, I had read with passion the Aventures de Buffalo Bill, which were then published as a weekly magazine; I could not imagine a more exciting life than roaming on horseback over the Great Plains and the Rocky Mountains. I was also a devotee of the stories about the American detectives Nick Carter and Nat Pinkerton; their feats in combating the criminal elements of American society had familiarized me with what I then imagined to be the downtown atmosphere of New York, Chicago and San Francisco. Later, in Paris and in Rome, I assimilated anything that came my way concerning the technologic and economic possibilities of North America. Although I had no clear idea of what these possibilities were, I was nevertheless eager to take my chance at them.

As I now realize, this distorted and fanciful introduction to American life was not peculiar to me. I participated unconsciously in the collective utopian dream of countless Europeans who imagined America as a land of complete liberty and material abundance, where people had been freed once and for all from the social shackles and economic restraints of a despotic, tired and depleted Europe. The New World had a more real existence in my reveries than on the map. When in October 1924 I boarded the old steamship Rochambeau, which took me in ten days from Le Havre to New York, I was not escaping from the Old World or searching for a new social philosophy, but simply attempting to convert into reality my daydream about the New World.

In ways that I could not have foreseen, chance has helped me to fulfill some of the expectations that motivated me to cross the Atlantic, but in a much more diversified way than I had imagined. To my chagrin, however, my acquaintance with the Rocky Mountains has been gained from trips by train, automobile and airplane, rather than from adventures on horseback. Although the greatest adventures of my American life have been sedate and sedentary, some of my most pleasurable memories are of the countless trips that have taken me repeatedly to each of the fifty states and also over most of Canada.

In 1927, before moving from Rutgers University in New Jersey, where I had taken up graduate studies, to the Rockefeller Institute for Medical Research (now Rockefeller University), where I became a laboratory scientist, I had the chance to travel by train over most of North America, acting as interpreter for an International Congress of Soil Science organized to visit agricultural experiment stations and typical soil formations in the United States and Canada. My first overall view of the continent was therefore from a traditional pullman car. Ever since that time, the immensity of the continent has been registered in my mind as a kind of moving picture orchestrated with the lonely call of the American trains, clicking off the miles. In my mind, this call was not suited to crowded settlements — as is the call of the European trains — but to the solitudes of a wild continent.

A Country on the Move

The experience of this long railroad trip has helped me understand the peculiar satisfaction that many Americans find in being constantly on the move. There is in fact a biological basis to the appeal of migratory life. The Stone Age hunters followed the seasonal migrations of wild game, a practice that may be at the origin of the great dispersals of mankind during prehistory and history. The colonization of the whole of North America in less than three centuries constitutes the most recent example of massive movement of people. Since the "winning of the West" will probably be the last of the great dispersals of mankind that began out of Africa during the Old Stone Age, the concept of the "open road" may well turn out to be one of the most characteristic features of American history, and perhaps its most romantic aspect.

In 1930, I spent the summer vacation driving from New York to the Northwest Pacific Coast. Crossing the continent on dusty or muddy log-crossed roads in an old car was then a strenuous enterprise, but one that helped me to recapture my childhood imaginings and give them substance. The Far West was then only half-tamed, and I had no difficulty recognizing Buffalo Bill's holy hunting grounds in Ne-

braska and Wyoming; I could also worship at his grave on Lookout Mountain in Colorado. Along the Snake River Valley in Idaho, the rows of poplar trees and the greenness of the irrigated farmland reminded me of the French countryside, but the friendly casualness of the human contacts in crude eating places and primitive overnight cabins made me experience a way of life different from anything I had known in Europe, and in most cases quite congenial to me. From the Snake River, I proceeded to the Columbia River and eventually had my first glimpse of the Pacific Ocean from a high elevation among the huge trees of an evergreen forest. This was the completion of my personal discovery of America, and I have wished ever since that fate had made me settle somewhere on the Northwest Coast. The phrase "Oregon Trail" still has for me rich overtones of adventure and romance; it symbolizes experiences that go back to the great migration through which mankind colonized the whole globe.

Like other French people of my generation, I began developing a global view of the earth in the 1920s while reading books such as Paul Morand's Rien que la terre (Only the Earth). I am amused by the fact that, half a century later, I coauthored with Barbara Ward a book with a similar title, Only One Earth, prepared for the United Nations Stockholm Conference on the Human Environment. While the two books are of course very different, they both have in common the theme that in some respects the earth can and should be understood as a global village. On the other hand, I also believe that we are now beginning to witness a revival of regionalism that will complement the global point of view.

The Urge for Adventure

While it is obvious that North America and Western Europe now share the same scientific technology and to a large extent the same economic and social problems, nevertheless I still perceive in the United States a vibration and a mood that makes the New World a social entity very different from the Old World. As Mexico's diplomat and author Octavio Paz remarked, "The word American designates a man defined not by what he has done but what he wanted to do." The novelist Thomas Wolfe also expressed the view that America was to be known not so much for what it is as for what it could become: "The true fulfillment of our spirit, of our people, of our land is yet to come."

Despite what Peter Schrag writes in his recent book, The End of the American Future, I believe that the urge for adventure and an almost physiological need to initiate new projects are still powerful components of the American ethos. Moving constantly in the academic as well as the technological world, over the whole conti-

nent, I find everywhere immensely vigorous people far more interested in change than in stability, more concerned with processes than with products. This dynamic attitude creates a national spirit of place that transcends the still strong and growing regional loyalties.

The psychological attitude toward landscape is one of the aspects of the national spirit of place by which the New World differs from the Old World. A sense of nostalgia is commonly the basis of psychological needs for a certain type of environment. Most normal human beings yearn to experience the environmental qualities they associate with a golden age or at least with a past they revere. For many Europeans and Asians, this feeling of nostalgia is identified with antiquity and with the great historical periods, as revealed by the influence of classical styles in the design of buildings and parks, and even in the management of nature. Such historical influences are of course also detectable in American life, but environmental nostalgia in the United States turns especially to experiences derived from a more recent past.

A Nostalgia for Wilderness

The pre-colonial occupation of North America by Indians left few permanent structures; furthermore, it had little impact on the ways of life of the white settlers. Consequently, the environmental nostalgia of Americans, especially of those descended from the early settlers who cleared the land, rarely goes further back than the eighteenth and nineteenth centuries. The heroic age of America cannot be antiquity or other classical periods, as is the case for Europe or Asia, but the short period — a century ago — that saw the clearing of the primeval forest, the breaking of the prairie, the winning of the West. The memories of this adventurous and turbulent past probably explain the tendency in the United States to identify the word nature with wilderness, and the pervasive longing among many Americans for life in the wild.

In practice, the wilderness is now more a subject of conversation than of direct experience. There is little if any primeval forest or other forms of wilderness left east of the Rockies, and not much on the Pacific Coast. Except for earnest campers and forest rangers, few are the Americans who really come in direct contact with untamed nature. But their nostalgia for wilderness expresses itself in the way they manage nature. The people of France and Italy emphasize formal design in their private gardens and in public landscape architecture. English people cultivate a picturesque seminatural atmosphere. In contrast, North Americans commonly prefer their nature to be rather wild; they like to maintain the rough and the unpruned even in their most humanized landscapes.

Qualitative differences between the Old World and the New World may have been produced even with regard to systems of transportation by the rapid spread of immigrants from the Atlantic to the Pacific Coast. In Europe travel means chiefly going from a particular place to another, either to visit a scenic area or, more commonly, to see a famous building. In contrast, moving for the sake of moving became very early a widespread behavioral pattern in America. This trait probably has its origin in the fact that instead of settling more or less permanently on the land they had cleared, as was the case for the Old World peasantry, a large percentage of American people continued to move in search of better lands or places of business. From Walt Whitman's "The Open Road" to Jack Kerouac's On the Road a century later, American literature has constantly given glamour to human restlessness — whether motivated by the desire to escape from sedentary life or by the search for new experiences.

The cultural conditioning for mobility certainly influenced the history and development of American railroads and highways. Much was being written in Europe a few decades ago about certain famous trains such as the Orient Express, the Trans-Siberian, the Flying Scotsman and the Blue Train, but the stories concerning them emphasized the romantic adventures or political intrigues taking place in the compartments, rather than what could be seen of the countryside from the train windows. In contrast, the various American railroad companies operating between the Middle West and the Pacific Coast used to compete by advertising the scenic wonders along their routes. In our times, several of the most famous American highways seem to be designed not so much for convenience and speed of transportation as for making available to the traveler the most spectacular aspects of the landscape. The hobo riding the rails is a picturesque and typically American symbol of the desire to be on the move, regardless of the destination.

Purpose of Mobility

In America, travel is, thus, often an end in itself, a value for its own sake. But being constantly on the move, taking to the open road, has become more and more commonly a social form of escape. In On the Road, Kerouac expressed the beatnik's horror of taking roots anywhere for fear of having to accept the constraints of society. The line "Where are we going, man? I don't know but we gotta go" speaks to all those who wish to escape — and who does not want to escape from social constraints at certain moments of his life? This longing for motion is far different from the desire to travel as a tourist for the sake of experiencing a pleasant or new sensation. It is different also from the urge that motivated forty-five million people, including me,

to migrate to the United States because they believed they were coming to the land of abundance and freedom.

In our times, boredom or economic reasons certainly motivate in part the enormous mobility of the American population, but this is not the whole story. As President Franklin Delano Roosevelt told the conservative Daughters of the American Revolution, "Remember, remember always, that all of us and you and I especially, are descended from immigrants and revolutionists." People of action and people with a purpose were probably at the origin of the American passion for travel, and for many of their descendants mobility is still associated with a sense of purpose and an eagerness for action.

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Benjamin Franklin also was taking an activist view toward social and geographical mobility when in 1784 he published, both in French and in English from his private printing press near Paris, a pamphlet entitled *Information to Those Who Would Remove to America*. In America, according to him, even poor people can "buy land sufficient to establish themselves," and artisans are always eager to receive apprentices and even to pay them while giving them training. "In America," Franklin told the Europeans with pride, "people do not inquire concerning a stranger, 'What is he?' but 'What can he do?'"

Speaking from my own experience as an old-fashioned immigrant, I believe that what Franklin wrote two centuries ago is still largely true today.

RECORDING

By A.R. Ammons

I remember when freezing rain bent the yearly pine over and stuck its crown to ground ice; but now it's spring and the pine stands up straight, frisky in the breeze, except for memory, a little lean.

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A DEMOCRACY OF CLOTHING

By Daniel J. Boorstin

Despite the expansion of twentieth century historical writing into the social and cultural spheres, most historians even today focus mainly on public events like wars, laws, political battles, and economic fluctuations. Dr. Boorstin is almost unique in his vision of technology as a central element in the transformation of daily life. Here he describes the democratizing impact of the sewing machine and ready-to-wear clothing on American life.

Appointed in 1975 to head the Library of Congress, Daniel J. Boorstin was for many years professor of American history at the University of Chicago and director of the National Museum of History and Technology in Washington. His major work is *The Americans*, in three vol-



umes (entitled *The Colonial Experience*, *The National Experience*, and *The Democratic Experience*), each of which has won a major prize for historical writing. His article is excerpted from the final volume of this trilogy, published by Random House.

he century after the Civil War was to be an Age of Revolution — of countless, little-noticed revolutions, which occurred not in the halls of legislatures or on battlefields or on the barricades, but in homes and farms and factories and schools and stores — so little noticed because they came so swiftly, because they touched Americans everywhere and every day. Not merely the continent but human experience itself, the very meaning of community, of time and space, of present and future, was being revised again and again; a new democratic world was being invented and was being discovered by Americans wherever they lived.

In the middle of the nineteenth century, European travelers to the United States were struck by a new American peculiarity. Just as travelers before them in the eighteenth century had noted the difficulty of distinguishing between American social classes by their habits of speech, and had noted that master and servant, even in the South, spoke in accents far more similar than did their English counterparts, they now noted the strange similarities of clothing.

In America it was far more difficult than in England to tell a man's social class by what he wore. The British consul in Boston in the

early 1840s, Thomas College Grattan, complained of American equality; he found servant girls "strongly infected with the national bad taste for being over-dressed; they are, when walking the streets, scarcely to be distinguished from their employers."

Before the end of the nineteenth century, the American democracy of clothing would become still more astonishing to foreign eyes, for by then the mere wearing of clothes would be an instrument of community, a way of drawing immigrants into a new life. Men whose ancestors had been accustomed to the peasant's tatters or the craftsman's leather apron could show by a democratic costume that they were as good as, or not very different from, the next man. If, as the Old World proverb went, "Clothes make the man," the New World's new ways of clothing would help make new men.

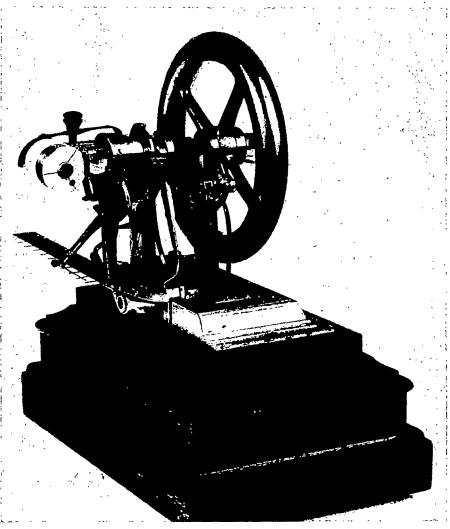
In the twentieth century, Americans would be the best clothed and perhaps the most homogeneously dressed industrial nation. It is hard to imagine how it could have happened without the sewing machine.

The Sewing Machine as Unifier

By 1871 the sewing machine, which only twenty years before had been a curiosity to be exhibited at fairs, was being manufactured at the rate of 700,000 a year. The machine was constantly being improved; before the end of the century nearly eight thousand patents had been issued on the sewing machine and its accessories. American manufacturers sent their machines all over. Competing in their claims for creating a new world-wide consumption community, the I.M. Singer Company asserted that by 1879 three-quarters of the machines being sold were Singers. An 1880 Singer brochure, immodestly entitled Genius Rewarded; or, the Story of the Sewing Machine, proclaimed:

On every sea are floating the Singer Machines; along every road pressed by the foot of civilized man this tireless ally of the world's great sisterhood is going upon its errand of helpfulness. Its cheering tune is understood no less by the sturdy German matron than by the slender Japanese maiden; it sings as intelligibly to the flaxen-haired Russian peasant-girl as to the dark-eyed Mexican Señorita. It needs no interpreter, whether it sings amid the snows of Canada or upon the pampas of Paraguay; the Hindoo Mother and the Chicago maiden are tonight making of the self-same stitch; the untiring feet of Ireland's fair-skinned Nora are driving the same treadle with the tiny understandings (sic) of China's tawny daughter; and thus American machines, American brains, and American money are bringing the women of the whole world into one universal kinship and sisterhood.

In the 1860s, styles changed. Just as the improvement of woodcarving machinery produced ever more ornate furniture, now the



Isaac Howe's innovative, but ultimately unsuccessful, 1846 sewing machine with eye-pointed, horizontal needle. It was replaced the next year by a more convenient machine with a vertical needle.

sewing machine produced elaborately draped overskirts, a new opportunity to display fancy sewing and intricate trimmings. In this way, too, a use was found for the numerous sewing-machine attachments: hemmers, fellers, binders, tuckers, rufflers, shirrers, puffers, braiders, quilters, hemstitchers, and even an etcher adept at "beautiful machine embroidery in imitation of the Kensington hand stitch."

The consequences of the sewing machine were not merely aesthetic or humanitarian. In America the sewing machine helped change the social meaning of clothing: a larger proportion of people than ever before could wear clothes that fit them, and could look like the best-off men and women. "The sewing-machine," observed the biographer James Parton, "is one of the means by which the industri-

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ous laborer is as well clad as any millionaire need be, and by which working-girls are enabled safely to gratify their woman's instinct of decoration."

In the latter half of the nineteenth century the United States experienced a Clothing Revolution — more far-reaching, perhaps, than any that had occurred since the birth of modern textile technology. Alexander Hamilton had noted in his Report on Manufactures (1791) that four-fifths of the American people's clothing were made in their own households for themselves. Only the rich could afford to employ tailors. At first these tailors traveled the countryside working on material supplied by customers, and eventually they settled down in the cities.

The Appearance of Ready-Made Clothes

A ready-made-clothing industry did not begin to develop until the early decades of the nineteenth century. At first only the cheapest grades of clothes could be bought in stores. Shops in New Bedford, Massachusetts, for example, supplied sailors with the clothing they needed quickly when they had just returned from a long voyage or when they were hastily preparing to sail again. Sailors put these store-bought clothes in their sea chests, generally known as "slop chests" (after the Old Norse word for the loose smock or the baggy breeches of the kind sailors wore). The clothes they bought were therefore called "sailor slops," and the places where these were sold were called "slopshops." "Slop clothes" or "slops" became a synonym for ready-made clothes. Cheap ready-made clothing was also in demand in the South for Negro slaves, and in upstart Western towns for newly arrived miners who had no household to make clothes for them.

In those days neither the buying nor the selling of secondhand clothes was disreputable; and even today in poorer nations castoff clothing is a staple of country fairs and cheap city shops. In the United States, too, before the Civil War, there was a sizable trade in castoff clothing, much of it destined for the South and West. Metropolitan newspapers like the New York *Herald* printed scores of advertisements for secondhand clothing.

Work clothes for Negroes and for sailors long remained the only clothing manufactured in quantity. A few ready-made garments were turned out as a sideline by the custom tailor. The demand for ready-made clothing grew fastest in the South and West, and establishments grew on the eastern seaboard to satisfy these needs.

The American revolution in clothing, which was well under way before 1900, was a double revolution: in the making of clothing (from the homemade and the custom-made to the ready-made or factorymade) and in the wearing of clothing (from the clothing of class display, by which a man wore his social class and his occupation on his sleeve, to the clothing of democracy, by which, more than ever before, men dressed alike). In Western mining camps, on wagon train journeys west, on long sea voyages, men could not carry elaborate wardrobes. Specialized skills were few, and qualified custom tailors scarce. At the same time that wealthy Americans found it hard to dress as elegantly as wealthy Europeans, the new technology of the garment industry was making it easier for Americans in moderate circumstances to dress well.

By mid-century, the sewing machine was being used in the factory production of clothing. When the chain stitch, which unraveled if the thread was broken at any point, was displaced by the lock stitch, machine sewing was as strong as that by hand. Improvements and attachments, like the buttonholer, made the machine versatile enough for most sewing tasks. And new cutting machines which could slice through eighteen thicknesses of cloth made it easy to prepare numerous garments of the same size.

Then the Civil War brought an unprecedented demand for large quantities of men's wear. In mid-1861 the need was for uniforms to outfit an army of hundreds of thousands; in the fall of 1865, for civilian clothing to outfit the demobilized hundreds of thousands. The clothing business suddenly became attractive and profitable. The demand for uniforms had encouraged standardization. When the government supplied measurements for the uniforms it required, it gave manufacturers the most commonly recurring human proportions. With this information, manufacturers developed a new science of sizing and began to make garments in regular sizes. Between 1880 and 1890 the total value of the products of manufacturing industries that used the sewing machine increased by 75 percent, to well over \$1,000 million. This was due largely to the sudden growth of the ready-made-clothing industry, including shoes, which accounted for 90 percent of sewing machine products.

Clothing the Nation

The wearers of all sorts of factory-made clothing increased by the tens of thousands. As early as 1832 there had been an American shirt factory; the manufacturing of men's detachable collars grew about the same time, and within a few years there was a thriving business in shirts and collars. The value of manufactured men's garments nearly doubled between 1860 and 1870. In the next two decades the business was still one for pioneers. As late as 1880 less than half of men's clothing was purchased ready-to-wear. But by the beginning of the twentieth century it had become rare for a man or boy not to be clothed in ready-made garments. Now even the wealthy, who had

once employed tailors, were buying clothes in the better shops. By 1890 the value of clothing sold in shops amounted to about \$1,500 million; about three-quarters of the woolen cloth made in the United States were being consumed in the manufacture of readymade clothing.

Alexander Hamilton's statistics had been reversed. Now, according to the best estimates at the time, nine-tenths of the men and boys in the United States were wearing clothing made ready to put on. The Americanism "hand-me-down" (in England it was "reach-me-down" to signify clothing that was simply reached down from a rack) had come into general use to signify shabby clothing. New expressions were needed for the good-quality new clothing now sold in shops. "Ready-to-wear" in the early twentieth century began to supplant "ready-made," with a significant new emphasis not on the maker but on the wearer.

Not only suits and coats, but everything else that people wore hats, caps, shirts, undergarments, stockings, and shoes - were now for the first time generally beginning to be bought ready-made. Until the mid-nineteenth century, the shoes that could be bought ready-made in shops were "straights" - that is, there was no difference between rights and lefts. Then American manufacturers began to turn out "crooked shoes," specially cut to fit the right or the left foot, and the increase in the mass production of shoes in the decade before 1860 brought (in the language of the Census Report of that year) a "silent revolution" in footwear. By 1862 Gordon McKay, a Massachusetts industrialist, had perfected a machine that sewed the soles to the uppers, just in time to help supply the Union demand for army shoes by the thousands. After the war the working class was buying factory-made shoes, but it was several decades before the middle classes and well-to-do were provided with factory shoes to their taste.

The Role of Immigrants

It happened, too, that the character of immigrants who came in the last twenty-five years of the nineteenth century stimulated the clothing industry. Many from Germany, Russia, Poland, and Italy were tailors. Among the 400,000 Jewish immigrants in the first decade of the twentieth century, more than half were in the needle trades. At the same time the new sewing machine, requiring very little skill, attracted into the work many wives and sons and daughters of the immigrants in the Eastern cities.

An infamous by-product of the sewing machine was the "sweat-shop" (an Americanism first noted about 1892), where women and children worked long hours at piecework for low wages. But in the clothing industry, too, where the business unit was small and the

machinery inexpensive, it was less difficult than elsewhere to move up from wageworker to employer. In many unpredicted ways, then, the nation's new clothing industry could be an agent of democracy. "The multitude is clothed by the clothier, not by the tailor," a pioneer American merchant-clothier boasted at the turn of the century. "And if ... the condition of a people is indicated by its clothing, America's place in the scale of civilized lands is a high one. We have provided not alone abundant clothing at a moderate cost for all classes of citizens, but we have given them at the same time that style and character in dress that is essential to the self-respect of a free democratic people."

Ready-made clothing instantly Americanized the immigrant. When the hero of Abraham Cahan's novel, The Rise of David Levinsky, arrived in New York from Russia in 1885, his benefactor, eager to make him at once into an American, took him to store after store, buying him a suit of clothes, a hat, underclothes, handker-chiefs (the first white handkerchiefs he ever possessed), collars, shoes, and a necktie. "He spent a considerable sum on me. As we passed from block to block he kept saying, 'Now you won't look green,' or 'That will make you look American.' "Nothing else could so rapidly and painlessly transform the foreigner into one who belonged.

CIVIL RELIGION IN AMERICA

By Robert N. Bellah



There is no official religious institution in the United States — the separation of church and state is specifically asserted in the U.S. Constitution. Yet Americans consider themselves, and are considered by others, to be a religious, if heterodox people. Our author, a specialist in religious history, argues that there has traditionally been a common core of beliefs and ceremonies in the United States, and that this "civil religion" carries great weight in the inner life of the country. As evidence he cites from the public utterances of four representative American Presidents: George Washington, Thomas Jefferson, Abraham Lincoln, and John F. Kennedy.

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hile some have argued that Christianity is the American national faith, and others that church and synagogue celebrate only the generalized religion of "the American Way of Life," few have realized that there actually exists, alongside of and rather clearly differentiated from the churches, an elaborate and well-institutionalized civil religion in America.

The Kennedy Inaugural

President John F. Kennedy's inaugural address in 1961 serves to introduce this complex subject. It begins:

We observe today not a victory of party but a celebration of freedom — symbolizing an end as well as a beginning — signifying renewal as well as change. For I have sworn before you and Almighty God the same solemn oath our forebears prescribed nearly a century and three quarters ago.

The world is very different now. For man holds in his mortal hands the power to abolish all forms of human poverty and to abolish all forms of human life. And yet the same revolutionary beliefs for which our forebears fought are still at issue around the globe — the beliefs that the rights of man come not from the generosity of the state but from the hand of God....

And it concludes:

Finally, whether you are citizens of America or of the world, ask of us the same high standards of strength and sacrifice that we shall ask of you. With a good conscience our only sure reward, with history the final judge of our deeds, let us go forth to lead the land we love, asking His blessing and His help, but knowing that here on earth God's work must truly be our own.

There are three places in his brief address where Kennedy mentioned the name of God. If we could understand why he mentioned God, the way in which he did it, and what he meant to say in those three references, we would understand much about American civil religion. But this is not a simple or obvious task, and students of American religion would probably differ widely in their interpretation of these passages.

A Ceremonial Significance

It might be argued that the passages quoted reveal an essentially irrelevant role of religion in the very secular society that is America. The placing of the references in this speech at the opening and conclusion, providing a sort of rhetorical frame for the more concrete remarks, might indicate that religion has "only a ceremonial significance"; it gets only a sentimental nod, to placate the more "unenlightened" members of the community, before a discussion of the really serious business with which religion has nothing whatever to do. A cynical observer might even say that an American President has to mention God or risk losing votes. A semblance of piety, the cynic might add, is merely one of the unwritten qualifications for the office, a bit more traditional than, but not essentially different from, the present-day requirement of a pleasing television personality.

But sociologists know enough about the function of ceremony and ritual in various societies to make us suspicious of dismissing something as unimportant because it is "only a ritual." What people say on solemn occasions need not be taken at face value, but it is often indicative of deep-seated values and commitments that are not made explicit in the course of everyday life. Following this line of argument, it is worth considering whether the very special placing of the references to God in Kennedy's address may not reveal something rather important and serious about religion in American life.

President Kennedy was a Christian, more specifically a Catholic Christian. Thus, his general references to God do not mean that he lacked a specific religious commitment. But why, then, did he not

include some remark to the effect that "Christ is the Lord of the world," or some indication of respect for the Catholic Church? He did not because these were matters of his own private religious belief and of his relation to his own particular church; they were not matters relevant in any direct way to the conduct of his public office. Others with different religious views and commitments to different churches or denominations are equally qualified participants in the political process. The American principle of separation of church and state guarantees the freedom of religious belief and association; but at the same time it clearly segregates the religious sphere, which is considered to be essentially private, from the political one.

Considering the separation of church and state, how is a President justified in using the word God at all? The answer is that the separation of church and state has not denied the political realm a religious dimension. Although matters of personal religious belief, worship, and association are considered to be strictly private affairs, there are, at the same time, certain common elements of religious orientation that the great majority of Americans share. These have played a crucial role in the development of American institutions, and still provide a religious dimension for the whole fabric of American life, including the political sphere. This public religious dimension is expressed in a set of beliefs, symbols, and rituals that I call the American civil religion. The inauguration of a President is an important ceremonial event in this religion. It reaffirms, among other things, the religious legitimation of the highest political authority.

Sovereignty Belongs to God

Let us look more closely at what Kennedy actually said. First he said, "I have sworn before you and Almighty God the same solemn oath our forebears prescribed nearly a century and three quarters ago." The oath is the oath of office, including the acceptance of the obligation to uphold the Constitution. He swears it before the people (you) and God. Beyond the Constitution, then, the President's obligation extends not only to the people but to God. In American political theory, sovereignty rests, of course, with the people, but implicitly, and often explicitly, the ultimate sovereignty has been attributed to God. This is the meaning of the motto, "In God we trust," as well as the inclusion of the phrase "under God" in the conclusion of the pledge to the flag with "one nation, under God, indivisible, with liberty and justice for all." What difference does it make that sovereignty belongs to God? Though the will of the people as expressed in majority vote is carefully institutionalized as the operative source of political authority, it is deprived of an ultimate significance. The will of the people is not itself the criterion of right and wrong. There is a higher criterion in terms of which this will can be judged; it is possible that the people may be wrong. The President's obligation extends to the higher criterion.

When Kennedy said that "the rights of man come not from the generosity of the state but from the hand of God," he was stressing this point again. The rights of man are more basic than any political structure and provide a point of revolutionary leverage from which any state structure may be radically altered. That is the basis for his reassertion of the revolutionary significance of America.

But the religious dimension in political life, as recognized by Kennedy, not only provides a grounding for the rights of man, that makes any form of political absolutism illegitimate, it also provides a transcendent goal for the political process. This is implied in his final words that "here on earth God's work must truly be our own." What he means here is, I think, more clearly spelled out in a previous paragraph, the wording of which, incidentally, has a distinctly Biblical ring:

Now the trumpet summons us again — not as a call to bear arms, though arms we need — not as a call to battle, though embattled we are — but a call to bear the burden of a long twilight struggle, year in and year out, "rejoicing in hope, patient in tribulation" — a struggle against the common enemies of man: tyranny, poverty, disease and war itself.

The whole address can be understood as only the most recent statement of a theme that lies very deep in American tradition; namely the obligation, both collective and individual, to carry out God's will on earth. This was the motivating spirit of those who founded America, and it has been present in every generation since.

The Idea of a Civil Religion

The phrase civil religion is, of course, Rousseau's. In The Social Contract, he outlines the simple dogmas of the civil religion: the existence of God, the life to come, the reward of virtue and the punishment of vice, and the exclusion of religious intolerance. All other religious opinions are outside the cognizance of the state and may be freely held by citizens. While the phrase civil religion was not used, to the best of my knowledge, by the founding fathers, and I am certainly not arguing for the particular influence of Rousseau, it is clear that similar ideas, as part of the cultural climate of the late-eighteenth century, were to be found among the Americans. For example, Benjamin Franklin writes in his autobiography:

I never was without some religious principles. I never doubted, for instance, the existence of the Deity; that he made the world and govern'd it by his Providence; that the most acceptable ser-

vice of God was the doing of good to men; that our souls are immortal; and that all crime will be punished, and virtue rewarded either here or hereafter.

There is every reason to believe that religion, particularly the idea of God, played a constitutive role in the thought of the early American statesmen.

There are four references to God in the Declaration of Independence. The first speaks of the "Laws of Nature and of Nature's God," which entitle any people to be independent. The second is the famous statement that all men "are endowed by their Creator with certain unalienable Rights." Here Thomas Jefferson, the principal author of the Declaration, is locating the fundamental legitimacy of the new nation in a conception of "higher law" that is itself based on both classical natural law and Biblical religion. The third is an appeal to "the Supreme Judge of the world for the rectitude of our intentions," and the last indicates "a firm reliance on the protection of divine Providence." In these last two references, a Biblical God of history who stands in judgment over the world is indicated.

The intimate relation of these religious notions with the self-conception of the new republic is indicated by the frequency of their appearance in early official documents. For example, we find in Washington's first inaugural address of April 30, 1789:

It would be peculiarly improper to omit in this first official act my fervent supplications to that Almighty Being who rules over the universe, who presides in the councils of nations, and whose providential aids can supply every defect, that His benediction may consecrate to the liberties and happiness of the people of the United States a Government instituted by themselves for these essential purposes, and may enable every instrument employed in its administration to execute with success the functions allotted to his charge.

Nor did these religious sentiments remain merely the personal expression of the President. At the request of both Houses of Congress, Washington proclaimed on October 3 of that same first year as President that November 26 should be "a day of public thanksgiving and prayer," the first Thanksgiving Day under the Constitution.

An Austere God

The words and acts of the founding fathers, especially the first few Presidents, shaped the form and tone of the civil religion as it has been maintained ever since. Though much is selectively derived from Christianity, this religion is clearly not itself Christianity. For one thing, neither Washington nor Adams nor Jefferson mentions Christ in his inaugural address; nor do any of the subsequent presi-

dents, although not one of them fails to mention God. The God of the civil religion is not only rather "unitarian," he is also on the austere side, much more related to order, law, and right than to salvation and love. Even though he is somewhat deist in cast, he is by no means simply a watchmaker God. He is actively interested and involved in history, with a special concern for America. Here the analogy has much less to do with natural law than with ancient Israel; the equation of America with Israel in the idea of the "American Israel" is not infrequent.

What was implicit in the words of Washington already quoted becomes explicit in Jefferson's second inaugural, when he said: "I shall need, too, the favor of that Being in whose hands we are, who led our fathers, as Israel of old, from their native land and planted them in a country flowing with all the necessaries and comforts of life." Europe is Egypt; America, the promised land. God has led his people to estalish a new sort of social order that shall be a light unto all the nations.

What we have, then, from the earliest years of the republic is a collection of beliefs, symbols, and rituals with respect to sacred things and institutionalized in a collectivity. This religion — there seems no other word for it — while not antithetical to and indeed sharing much in common with Christianity, was neither sectarian nor in any specific sense Christian. At a time when the society was overwhelmingly Christian, it seems unlikely that this lack of Christian reference was meant to spare the feelings of the tiny non-Christian minority. Rather, the civil religion expressed what those who set the precedents felt was appropriate under the circumstances. It reflected their private as well as public views. Nor was the civil religion simply "religion in general." While generality was undoubtedly seen as a virtue by some, the civil religion was specific enough when it came to the topic of America. Precisely because of this specificity, the civil religion was saved from empty formalism and served as a genuine vehicle of national religious self-understanding.

But the civil religion was not, in the minds of Franklin, Washington, Jefferson, or other leaders — with the exception of a few radicals like Tom Paine — ever felt to be a substitute for Christianity. There was an implicit but quite clear division of function between the civil religion and Christianity. Under the doctrine of religious liberty, an exceptionally wide sphere of personal piety and voluntary social action was left to the churches. But the churches were neither to control the state nor to be controlled by it. The national magistrate, whatever his private religious views, operates under the rubrics of the civil religion as long as he is in his official capacity, as we have already seen in the case of Kennedy. This accommodation was un-

doubtedly the product of a particular historical moment and of a cultural background dominated by Protestantism of several varieties and by the Enlightenment, but it has survived despite subsequent changes in the cultural and religious climate.

Civil War and Civil Religion

Until the Civil War, the American civil religion focused above all on the events of the Revolution, which was seen as the final act of the Exodus from the old lands across the waters. The Declaration of Independence and the Constitution were the sacred scriptures, and Washington the divinely appointed Moses who led his people out of the hands of tyranny. The Civil War, which historian Sidney Mead calls "the center of American history," was the second great event that involved the national self-understanding so deeply as to require expression in the civil religion. In 1835, the French observer Alex de Tocqueville wrote that the American republic had never really been tried, that victory in the Revolutionary War was more the result of British preoccupation elsewhere and the presence of a powerful ally than of any great military success of the Americans. But in 1861 the time of testing had indeed come. Not only did the Civil War have the tragic intensity of fratricidal strife, but it was one of the bloodiest wars of the nineteenth century; the loss of life was far greater than any previously suffered by Americans.

The Civil War raised the deepest questions of national meaning. The man who not only formulated, but in his own person embodied its meaning for many Americans, was Abraham Lincoln. For him the issue was not in the first instance slavery but "whether that nation, or any nation so conceived, and so dedicated, can long endure."

The phrases of Jefferson constantly echo in Lincoln's speeches. His task was, first of all, to save the Union — not for America alone but for the meaning of America to the whole world so unforgettably etched in the last phrase of the Gettysburg Address: "that government of the people, by the people, for the people, shall not vanish from this earth."

But inevitably the issue of slavery as the deeper cause of the conflict had to be faced. In his second inaugural address, Lincoln related slavery and the war in an ultimate perspective:

If we shall suppose that American slavery is one of those offenses which, in the providence of God, must needs come, but which, having continued through his appointed time, He now will to remove, and that He gives to both North and South this terrible war as the woe due to those by whom the offense came, shall we discern therein any departure from those divine attributes which the believers in a living God always ascribe to Him?

He closes on a note if not of redemption then of reconciliation —

"With malice toward none, with charity for all."

A Lincolnian New Testament

With the Civil War, a new theme of death, sacrifice, and rebirth enters the civil religion. It is symbolized in the life and death of Lincoln. Nowhere is it stated more vividly than in the Gettysburg-Address, itself part of the Lincolnian "New Testament" among the civil scriptures. Poet Robert Lowell has recently pointed out the "insistent use of birth images" in this speech explicitly devoted to "these honored dead": "brought forth," "conceived," "created," "a new birth of freedom." Lowell goes on to say:

The Gettysburg Address is a symbolic and sacramental act. Its verbal quality is resonance combined with a logical, matter of fact, prosaic brevity....In his words, Lincoln symbolically died, just as the Union soldiers really died — and as he himself was soon really to die. By his words, he gave the field of battle a symbolic significance that it had lacked. For us and our country, he left Jefferson's ideals of freedom and equality joined to the Christian sacrificial act of death and rebirth. I believe this is a meaning that goes beyond sect or religion and beyond peace and war, and is now part of our lives as a challenge, obstacle and hope.

The new symbolism soon found both physical and ritualistic expression. The great number of the war dead required the establishment of a number of national cemeteries. Of these, the Gettysburg National Cemetery, which Lincoln's famous address served to dedicate, has been overshadowed only by the Arlington National Cemetery. Arlington has become the most hallowed monument of the civil religion. Not only was a section set aside for the Confederate dead, but it has received the dead of each succeeding American war. It is the site of the one important new symbol to come out of World War I, the Tomb of the Unknown Soldier; more recently it has become the site of the tomb of another martyred president, John F. Kennedy, and its symbolic eternal flame.

Religion and Politics

Civil religion at its best is a genuine apprehension of universal and transcendent religious reality as seen in or, one could almost say, as revealed through the experiences of the American people. Like all religions, it has suffered various deformations and demonic distortions. At its best, it has neither been so general that it has lacked incisive relevance to the American scene nor so particular that it has placed American society above universal human values.

The relation between religion and politics in America has been singularly smooth. As de Tocqueville wrote:

The greatest part of British America was peopled by men who, after having shaken off the authority of the Pope, acknowledged no other religious supremacy: they brought with them into the New World a form of Christianity which I cannot better describe than by styling it a democratic and republican religion.

The churches opposed neither the Revolution nor the establishment of democratic institutions. Even when some of them opposed the full institutionalization of religious liberty, they accepted the final outcome with good grace and without nostalgia for an ancien régime. The American civil religion was never anticlerical or militantly secular. On the contrary, it borrowed selectively from the religious tradition in such a way that the average American saw no conflict between the two. In this way, the civil religion was able to build up, without any bitter struggle with any church, powerful symbols of national solidarity, and to mobilize deep levels of personal motivation for the attainment of national goals.

Such an achievement is by no means to be taken for granted. It would seem that the problem of a civil religion is quite general in modern societies, and that the way it is solved or not solved will have repercussions in many spheres. One needs only to think of France to see how differently things can go. The French Revolution was anticlerical to the core, and attempted to set up an anti-Christian civil religion. Throughout modern French history, the chasm between traditional Catholic symbols and the symbolism of 1789 has been immense.

A Time of Crisis?

The American civil religion has not always been invoked in favor of worthy goals. On the domestic scene, a conservative type of ideology that fuses God, country, and flag has been used to attack noncomformist and liberal ideas and groups of all kinds. Still, it has been difficult to use the words of Jefferson and Lincoln to support special interests and undermine personal freedom. The defenders of slavery before the Civil War came to reject the thinking of the Declaration of Independence. Some of the most consistent of them turned against not only Jeffersonian democracy but Reformation religion; they dreamed of a South dominated by medieval chivalry and divineright monarchy. For all the overt religiosity of the radical right today, their relation to the civil religious consensus is tenuous, as when the John Birch Society attacks the central American symbols of Democracy itself.

The civil religion is obviously involved in the most pressing moral and political issues of the day. But it is also caught in another kind of crisis, theoretical and theological, of which it is at the moment largely unaware. "God" has clearly been a central symbol in the civil

religion from the beginning, and remains so today. This symbol is just as central to the civil religion as it is to Judaism or Christianity. In the late-eighteenth century this posed no problem; even Tom Paine, contrary to his detractors, was not an atheist. From left to right and regardless of church or sect, all could accept the idea of God. But today, the meaning of the word God is by no means so clear or so obvious. There is no formal creed in the civil religion. We have had a Catholic president; it is conceivable that we could have a Jewish one. But could we have an agnostic president? Could a man with conscientious scruples about using the word God the way all former Presidents have used it be elected chief magistrate of our country? If the whole God symbolism requires reformulation, there will be obvious consequences for the civil religion, consequences perhaps of liberal alienation and of fundamentalist ossification that have not so far been prominent in this realm. The civil religion has been a point of articulation between the profoundest commitments of the Western religious and philosophical tradition and the common beliefs of ordinary Americans. It is not too soon to consider how the deepening theological crisis may affect the future of this articulation.

A Moral and Religious Heritage

Behind the civil religion at every point lie Biblical archetypes: Exodus, Chosen People, Promised Land, New Jerusalem, Sacrificial Death and Rebirth. But it is also genuinely American and genuinely new. It has its own prophets and its own martyrs, its own sacred events and sacred places, its own solemn rituals and symbols. It is concerned that America be a society as perfectly in accord with the will of God as men can make it, and a light to all nations.

It has often been used and is being used today as a cloak for petty interests and ugly passions. It is in need — as is any living faith — of continual reformation, of being measured by universal standards. But it is not evident that it is incapable of growth and new insight.

The civil religion does not make any decision for us. It does not remove us from moral ambiguity, from being, in Lincoln's fine phrase, an "almost chosen people." But it is a heritage of moral and religious experience from which we still have much to learn as we formulate the decisions that lie ahead.

AMERICAN FRONTIER AS THE PROMISED LAND

By Ray Allen Billington

Old myths die hard, and none harder than the myths about the American frontier. Where one observer saw gunfights and Indian battles, another saw fertile land that would grow bountiful crops where none had been planted. Time has done little to demythicize the West; instead movies have reinforced many of the misperceptions. In the following article, a noted historian with Robert Burns' gift "to see ourselves as others see us," traces some of the more extravagant myths about that haven for the world's imagination, the American Wild West.

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he "Wild, Wild West" is alive and well in much of the world today, nearly a century after the last cowboy blazed a path of virtue across the Great Plains with his six-shooters, and the last Apache unleashed his arrows against the encircled wagon train. For the myth of the American frontier as a land of romance, violence, and personal justice has persisted and grown, to influence popular attitudes toward the United States and its policies down to the present.

The persuasive influence of the frontier image is nowhere better exhibited than by the cultists of other nations who try to recapture life in that never-never land of the past. In Paris, Western addicts buy "outfits" at a store near the Arch of Triumph called "The Western House," spend weekends at "Camp Indien" clad in Comanche head-dresses and moccasins, or don cowboy sombreros and spurred boots to gallop through the Bois de Boulogne — on Vespas.

In Austria, children play "Cowboy and Indian," or walk "Indian file" through the cobbled streets, their makeshift costumes contrasting strangely with half-timbered houses. In West Germany,

enthusiasts buy "Rodeo After Shave" and a deodorant called "Lasso," purchase Western clothes from two thriving chain stores (some buffs refuse to watch "Westerns" on television unless properly garbed), and belong to one of the sixty-three societies in the "Western Clubs Federation" whose members spend weekends in log houses, dress as Sioux Indians or cowboys, and carry realism to the uncomfortable extreme of using saddles for pillows and barring Indian impersonators from the club saloon. In Norway, a "Western" author, Murray Kane, is a national hero among the young; in Japan "Frontier" restaurants vie for customers, and a Frontier magazine has recently appeared.

So irresistible is the compulsion to imitate Western heroes that a Glasgow health officer not long ago lamented that Scottish lads were becoming round-shouldered and hollow-chested from copying the slouching stride of cowboys. Blue jeans transcend international boundaries in their appeal, even though, as in the Soviet Union, they cost a full month's pay and authentic Levis even more. Nor do elders set a different example; when Soviet Communist Party leader Leonid I. Brezhnev visited former President Richard M. Nixon in 1973, the one person he greeted with bearhug enthusiasm was Chuck Connors, the hero of a television series called *Rifleman*.

All are responding to the image of the American West projected by twentieth-century films, novels, and television programs: a sundrenched land of distant horizons, peopled largely by scowling bad men in black shirts, villainous Indians, and those Galahads of the Plains, the cowboys, glamorous in hip-hugging Levis and embroidered shirts, a pair of Colt revolvers worn low about the waist. A land, too, of the shoot-out, individual justice, and sudden death at the hand of lynch mobs. Recently, an Israeli army psychologist, pleased that his country's soldiers did not use their guns when on leave, expressed delight that "There is no shooting like in the Wild West."

That such an image should be popular today is easy to understand. To empathize with a make-believe land of masculinity and self-realization is to forget momentarily the monotony of a routinized machine civilization, to escape the uncertainties of a turbulent world, and to recapture an unregimented past. The vogue of a "Western" cult demonstrates a universal urge to lessen the controls necessary in today's societies.

Source of Western Image

To understand that vogue is relatively easy; to trace the genesis of the frontier image demands a more extended analysis. Images do not emerge overnight, nor are they unrelated to the experiences of their holders. Instead, they customarily define the past in terms of today's values, and evolve in directions governed by the psychological needs of the present. How, then, has the frontier image now current been shaped by prior experiences and modified to meet modern emotional needs?

The modern concept of the American West blends two different images that emerged during the eighteenth and nineteenth centuries. One pictured the frontier as lawless, brutal, and repelling, molded by a savage environment that reduced the frontiersmen to semi-barbarism. The other painted the West as a transplanted Eden, overflowing with the bounties of nature, and beckoning the dispossessed to a new life of abundance and freedom. How and why did these conflicting images emerge and blend during the nineteenth century?

The myth of the frontier as a land of violence and lawlessness was the invention primarily of imaginative novelists and prejudiced travelers. The European travelers who visited the West during the late eighteenth and nineteenth centuries can be counted by the hundreds; more than fifty of their accounts were published in Germany in the thirty years after 1815, over two hundred in England, nearly forty in Japan after 1868, dozens in France and Italy, eight in Hungary. The picture they painted was shaped by political bias;

Hungary. The picture they pain conservatives exaggerated the brutalizing impact of frontier democracy on men and institutions, while liberals overstressed the virtues of manhood suffrage and social equality. Both, however, were shocked by the crudities of Western life, and the contrast between the cultural sophistication of their homelands and the primitive societies they encountered on the borderlands.

Even more influential than travelers as image-makers were novelists. James Fenimore Cooper set the example. His Leather-stocking Tales about the New York State frontier took Europe by storm; they were translated into a dozen languages, sold hundreds of thousands of copies, and continue to be read today; in Russia alone, thirty-four editions of Cooper's

Indian Torchbearer: "Ere the base laws of servitude began, when wild in woods the noble savage ran."

—John Dryden National Gallery of Art, Washington, D.C., Bicentennial Exhibit, December 1975-February 1976.





collected works have been published, two of them since 1917. Such popularity inspired imitation, and in Cooper's wake a host of novelists turned to the American West as a scene for their adventures.

To single out a few of the giants of the trade is to do an injustice to dozens more: in England, Mayne Reid and Percy St. John; in France, Gustave Aimard and Gabriel Ferry; in Italy, Emilio Salfari; in Germany, Charles Sealsfield, Friedrich Gerstäcker, and Balduin Möllhausen. All were prolific writers (Balduin Möllhausen wrote more than 150 books, and most of the others as many as thirty), and all were translated widely. Their school of literature (if it may be thus called) was climaxed at the end of the century when Karl May introduced the ultimate Westmann, "Old Shatterhand," and his faithful Indian companion, "Winnetou," to the German public. May's seventy novels have sold thirty million copies in over twenty languages, and still sell a million copies yearly. An annual Karl May Festival in West Germany attracts some 150,000 of the dedicated; Karl May films, Karl May plays, and Karl May toys have captivated, and still captivate, a sizable portion of Europe's population.

Why the Fantasy?

The American West pictured by these sensation peddlers was an unbelievable fantasy land where savage animals and equally savage Indians lurked in tropical forests, where fights with daggers and revolvers were part of the daily routine, and where life was of uncertain duration for all not prepared to kill an opponent before he could whip his bowie knife from its sheath or his "forty-five" from its holster. Certainly, this Wild West bore not the faintest resemblance to the West that was: a West of sweating farmers, cowboys who more often worked in derby hats than sombreros (and many of whom were Negroes or Mexican-Americans), and law-abiding citizens whose principal objective was to reproduce the orderly societies of the East as rapidly as possible. Why this distortion?

Ignorance was not always the answer. Karl May did not visit the United States until just before his death, but other novelists knew the frontier well. Charles Sealsfield lived for years in the Southwest, much of Gustave Aimard's youth was spent beyond the Mississippi, and Balduin Mollhausen gained his first fame accompanying exploring expeditions into the Rocky Mountain country. Yet truth cramped their writing but slightly. Instead, their imaginative creations were molded to the tastes of their sensation-seeking audiences, who then, as now, thirsted for vicarious thrills. A Texan visiting in London during the 1840s realized this when he met some of England's most eminent intellectuals. "They listened with deference to all that I said," he reported, "but ...with delight to the accounts of our Indian fights, prairie life, and buffalo hunts." The

temptation to cater to the whims of readers demanding ever more excitement was too profitable to be resisted.

Some of the exaggerations of novelists and travelers can be forgiven as typical — and delightful — tall tales. No reader could possibly believe that the soil in Arkansas was so rich that settlers made candles by dipping wicks in mud puddles, or that land in Kansas was so fertile that it produced fifty bushels of maize to the acre when none had been planted. Nor could even the most gullible take seriously the account of a buffalo hunt in which an Indian was caught in the middle of a stampeding herd, but escaped by leaping from back to back of the charging beasts, pausing in his flight to lance some of the fattest cows.

But less excusable were fantasies only slightly less unbelievable: the Gila River Valley (actually an arid desert) teeming with alligators, monstrous boa constrictors, and giant basilisks "crawling silent and sinister beneath the leaves"; an Apache heroine, "White Gazelle," dressed in "loose Turkish trowsers, made of Indian cashmere, fastened at the knees with diamond garters ...while a jacket of violet velvet, buttoned over the bosom with a profusion of diamonds, displayed her exquisite bust"; an earthquake that sloshed the Colorado River over its banks to quench a forest fire that threatened the hero; an ostrich hunt staged by the Blackfeet Indians of Montana that ended with a great feast," for the ostrich is excellent eating, and the Indians prepare, chiefly from the meat on the breast, a dish renowned for its delicacy and exquisite flavor."

Hunters, Squatters, Pioneers

Novelists and travelers paid only slightly more tribute to actuality when they described the frontiersmen who peopled these wilds. Three types were identified: "Hunters," who roamed far ahead of the settlements; "Squatters," who made the first assault on the wilderness; and "Pioneers," who extended their clearings and heralded the first coming of civilization. Actually there was little to distinguish these stereotypes; all three represented stages in the degradation of civilized man. Yet the image-makers elevated the "Hunter," who was actually the least savory of the lot, to a role as hero, picturing him as a godlike superman, ennobled spiritually by daily contacts with nature. Conversely, they painted the "Squatters" as barbarous social outcasts, and the "Pioneers" as not much better — crude, unmannerly illiterates, unworthy of the company of cultured men.

These distinctions, both false and artificial as they were, demonstrate the persistence of traditionalism in myth-making. The "Hunter" was a type long familiar to readers, and hence demanded by them — a reincarnation of the "Child of Nature" so glorified in

eighteenth-century romanticism. Reared in the forests' haunting silence, these "primitive-strong" (as a German writer named them) blended the best of primitivism and civilization. Cruel they were, for they must kill the Indians who blocked their countrymen's path, westward, but their cruelty was transcended by an inner nobility. This was God-given, the gift of intimacy with the Creator through His creations. "Among them," wrote a German novelist, "I have observed a genius which would have done honor to the greatest philosophers of ancient and modern times." He was speaking, mind you, of semi-barbarians, most of them illiterate, who had traded civilization's restraints for savagery's brutal freedom.

The "Squatters," by contrast, were depicted as near animals who had rejected civilization without acquiring any of nature's blessings. "The very outcasts of society," they were called; "the scum and the dregs." Sunk in sloth and laziness, they were destined to flee forever from normal humans. The "Pioneers" were little better. They were pictured as crude, boastful, ill-mannered braggarts, living slovenly lives, and disdainful of the higher values that distinguished civilized men from barbarians.

Bad Images ...

Image-makers delighted in isolating traits of the "Pioneers" that they found especially annoying. One was their eternal boasting. Travelers reported listening to an incessant litany of self-praise: "The Americans were more learned, more powerful, and altogether more extraordinary than any other people in the world." The United States had the most fertile soils, the strongest armies, the biggest cities, the largest rivers, the noisiest thunder, and (according to one traveler) the longest history of any nation on the globe. Conversely, the rest of the world was a decaying ruin. Asia was a heathen backwash doomed to perpetual misrule; Europe was sunk in despotism and poverty — "A heap of medieval feudal states ... that have not enough vitality to rise from the abyss of misery and corruption into which they have fallen as a result of centuries of ignorance and despotism." The New World was outstripping the Old; soon England would be known only as the mother of the United States.

Just as annoying as the constant "puffing" (to use the language of the day) were the abominable manners of the "Squatters" and "Pioneers." Their principal offense against good taste was their constant tobacco-chewing. Along the frontiers, said the imagemakers, all men's jaws were perpetually in motion as they chewed and spat, chewed and spat, for all the world (to quote a Polish observer) "as though they were some species of ruminating animal." The entire West, indoors and out, was carpeted with dried tobacco juice, while spitters were a constant menace even though most were

good shots. "When you are surrounded with shooters," as one traveler wrote feelingly, "you feel nervous." So universal was the habit that the twang noticeable in Western speech was ascribed to the fact that Westerners' mouths were always so full of juice that they could not be opened without overflowing, forcing the "Pioneers" to speak through their noses.

Above all, the frontier was a Babylon of Barbarism. On the Mississippi valley frontier, rough-and-tumble fights occurred daily, with each battler striving to bite off the nose, claw off the ears, or gouge out the eyes of his opponent. Eye gouging particularly lent itself to gory descriptions; travelers devoted page after page to imaginary battles that ended with one fighter plunging his thumbs into an enemy's eye, or rising from the fray with the symbol of victory — his opponent's eye ball — held in his hand. West of the Mississippi, lethal battles with bowie knives and six-shooters became the stock-intrade of the image-makers, for in that Wild West of their creation every man was armed, and the code of honor demanded instant retaliation for every insult, real or imagined. Legal justice was totally lacking in this make-believe land.

... and Good

The image projected by novelists and travelers — of crude, ill-mannered frontiersmen and a lawless society — was a forbidding one, and hence hardly pleasing to another group of image-makers. These were promoters whose purpose was to attract immigrants to the West: guidebook authors, agents for land-grant railroads eager to sell their excess holdings, propagandists for land and immigration companies, and particularly successful immigrants hoping to lure their former countrymen to the land they found so rewarding. They produced glowing accounts in "America Letters," as they were called — particularly effective, for they were believed to be utterly trustworthy. "America Letters" spanned the oceans by the thousands during the nineteenth century, were read in village churches, published in local newspapers, and played a major role in picturing frontier life to the rest of the world.

The image that they projected differed so markedly from that of novelists and travelers that those who read were forced to make a difficult decision. Should they believe that the frontier was a brutalizing wasteland, or a new Canaan, assuring prosperity and freedom to all? Faced with this dilemma, some readers simply rejected what they disliked hearing; others accepted both images as valid, but ranked one above the other on their own value scale. A Norwegian folk ballad pictured a would-be emigrant as he pondered this decision:

I know the venture will cost me dear in the hardships of exposure to sun and storm, in fierce battles with scorpions and serpents and wild beasts, in deadly duels with drawn daggers. But that is better than to fight one's own people and get nothing for it.

That millions of Europeans and Asians decided to migrate testified to the effectiveness of the image-makers who sang of the American West as a land of promise.

And what a promising land they pictured! A farm of one's own an impossibility in most of the world — was assured all. A penniless immigrant could hire out as a farm worker at a dollar a day, for there was work for all in the labor-hungry West. He could live on two dollars a week, saving enough each fortnight to purchase ten acres of land, so fertile that it had only to be scratched to produce abundant crops. With a farm of his own, he was assured perpetual freedom from want or care. On the frontier all ate meat three times a day, and wood was so plentiful that cabins were never cold. More food was thrown to the dogs in a week in a frontier home than a European peasant consumed in a year. Imagine the longings of a German who seldom tasted meat reading of a frontiersman in a Western inn filling his plate twice with beef, pork, venison, chicken, turkey, and fish, then ordering a large bowl of soup because "soup trickles down . . . where beef and ham try in vain to enter." He might agree with an Irish slogan: "The only place in Ireland where a man can make a fortune is America."

Such exaggerations might be questioned, but who could doubt the testimony of former neighbors when their "America Letters" recited their success stories in simple prose: "We sold our farm last winter for \$800"; "We have five horses, seventeen cattle, thirteen sheep, and twenty-four hogs"; "I have deposited \$800 in the bank"; "Our farm is worth \$5,000 or \$6,000"; "I have 140 acres of land fenced, and nearly thirty under a good state of improvement." "After five or six years," a Japanese guidebook promised, "the person having no pennies will become a very rich man."

This image of frontier prosperity was further attested by ballad makers, who carried the promises of the image-makers into the realm of absurdity. In the West of their creation lay a new Eden, where "the hedges consist of sides of bacon and tobacco, so that you may lie in the shade of the bacon and smoke the tobacco"; where "tea and coffee and clotted cream fairly drown the settlers, pork and wheat are one's daily bread, and everyone lolls on the lap of fortune." Throughout Scandinavia peasants sang — and still sing —

They give you land for nothing in jolly Oleana And grain comes leaping from the ground in floods of golden manna. The grain it does the threshing, it pours into the sack, Sir,
So you can take a quiet nap, a-stretching on your back, Sir.
The little roasted piggies, with manners quite demur, Sir,
'They ask, "Will you have some ham?" and then you say, "Why sure, Sir."

The American Promise

Particularly when the frontier offered something even more alluring than abundance: the promise of equality and freedom. If any phrase appeared more often in "America Letters" than "We eat meat three times a day," it was "Here we tip our hats to no one." In a new land where men were few and necessary tasks many, all who worked were respected, no matter how menial their duties. The manual laborer contributed to society no less than the merchant or lawyer, and deserved to be treated in the same way. "Here," wrote a recent immigrant, "workingmen are not afraid of their masters; they are seen as equals."

Such class distinctions as did exist, all agreed, were based on wealth rather than lineage. What a man was, not what his family had been, determined his place in society. "Out West," a British visitor reported, "the one question asked is 'What can you do?' not 'Who was your father!'" Given these standards, a place in the upper crust of society awaited all who were enterprising. Gentlemen could be made of the coarsest stuff in a land where a fortunate speculation could overnight transform the village pauper into the community's richest — and hence most respected — citizen. "In Europe," Germans were told, "a man works to live; here he works to become rich."

With equality went liberty — the liberty to think and act as one chose. "Here," a recent arrival wrote his old neighbors, "no emperor and no king has the right to command us to do anything." Where all were equal, all governed; a common citizen had the right to slander and damn his government, abuse public officials to their faces, and call the President of the United States a fool without calling down the wrath of his fellows or the firm hand of the law. "Here I am free," was a repeated phrase in "America Letters."

Personal independence was so venerated that it was sometimes asserted in extreme form. A traveler who objected to the off-key singing of a boatman was told that "he was in a land of liberty," and had no right to interfere. A lad on the Illinois frontier, scolded by his mother for appropriating a piece of cake, answered: "Why, Mother, aren't we in a free country now?" Absurdities, perhaps, but they mirrored the outlawing of subserviency on the frontier.



Gold Rush Camp: In the West, in the European imagination, lay a new Eden.

National Gallery of Art, Washington, D.C., Bicentennial Exhibit, December 1975-February 1976.

Such were the mores of republicanism reported by image-makers that any social distinctions were vigorously opposed by frontiersmen. This seemed logical; in a land where abundance was within the reach of the most humble, none could be humble. Travelers soon learned that they risked insult, if not injury, if they forgot that simple fact. Often told was the tale of the traveler who sent for a tailor to be measured for a coat, and was told that such a procedure was not republican; of the serving maid who refused to allow her mistress to ring for her unless she could ring for the mistress whenever "she desired to have speech with her"; of the hostler requested to call a guest in the morning shouting, "Call yourself and be damned."

All People Are Equal

Titles were taboo in that egalitarian society. All men were "Mr." and referred to each other as "Gentlemen"; all women were "Madam" or "Miss" and were universally called "Ladies." Travelers from less democratic lands never tired of listing examples of frontier usage: the coachman who asked his passenger, "Are you the man

going to Portland, because if you are, I'm the gentleman that's going to drive you"; the frontier landlord who asked a group of stagecoach drivers, "Which is the gentleman who brought this man here?"; the court defendant who testified that "he and another gentleman had been shoveling mud"; the newspaper report of "two gentlemen who were convicted and sentenced to six month's imprisonment for horse stealing."

Personal relationships were as democratized as forms of address, according to the image-makers. This was particularly true in frontier inns, where laborers and judges, drovers and merchants, magistrates and stagecoach drivers, dined side by side, waited on by "helps" (the word servant was never used), who addressed them by their first names, leaned over chairs to take part in the conversation, and shed their coats to join in a game of cards when the meal was over. This was offensive enough to class-conscious visitors, but worse was the application of democratic principles to sleeping arrangements. Guests were assigned to beds in the order of their arrival, with two, three, or four in each bed. Judges snored next to teamsters, legislators beside wagoners, bankers with hog drivers as their partners. "A most almighty beautiful democratic amalgam", one Westerner was heard to call it. But hardly pleasing to the fastidious, for guests were changed more often than the sheets. One who objected was rudely reminded that "since Gentlemen are all alike, people do not see why they should not sleep in the same sheets."

The image-makers who pictured the American frontier for their readers performed their task well. By the 1890s, wrote a Czech publicist, "the most illiterate peasant in the Balkans, who did not even know the name of his county-seat, knew about America, about its free land and the absence of landlords."

Influence of the American Image

The projection of this image played a role, no matter how minor, in stirring the spirit of rebellion that underlay many of the economic, social, and political reforms of the late nineteenth and early twentieth centuries. Peasant farmers in Europe who learned of a land where all ate meat three times daily and tipped their hats to no one would no longer accept their subservient role with the same docile humility. Their horizons had been widened, their ambitions stirred by visions of a better life. "This people," wrote a Swedish publicist, "which has for so many years been satisfied with its meagre lot, has begun to reason with itself, and has found that things could be better than they are." The seeds of discontent had been planted, and only domestic reforms could keep them in check.

These reforms remade many of the Old World's institutions, but

nowhere did the frontier image play a more important role than in the debate over the right of men — all men — to govern themselves. Liberals and conservatives agreed that the lot of the poor in the American West was better than in the Old World. They disagreed on why. Liberals, favoring reform, insisted that the higher living standards there were the product of democratic institutions; the frontier was a paradise for small farmers, because small farmers shaped its policies. Liberalize the government in the Old World, they said, and it will reward the liberalizers by the same affluence enjoyed by the New.

Conservatives answered that American prosperity and equality were the products solely of cheap Western lands, and hence beyond the grasp of settled nations. Manhood suffrage succeeded simply because the frontier drained workers from the East, thus intensifying competition for jobs and elevating the wages of those who remained. At the same time it syphoned off the discontented, who posed the greatest threat to the social system. Cheap lands also equalized the ownership of property, allowing the majority a stake in society, and with it the sense of social responsibility necessary for a stable electorate. Older nations, with no reservoir of occupiable land, argued conservatives, were unsuited to democracy.

The effectiveness of this argument was demonstrated by reformers in Denmark, Sweden, Norway, and Prussia; acknowledging the validity of the frontier as a "safety-valve," they tried to create artificial frontiers to drain away excess workers and raise the living standard of the remainder. In Denmark, this ambition helps explain the *Husmand* Movement designed to parcel great estates among small holders; in Norway and Sweden, it underlay an effort to drain swamp lands and open hitherto unoccupied northern territories to peasants; in Prussia it was directed toward dividing the giant Junker holdings. These moves failed, but their popularity suggests that the image of the American frontier as a land of promise was not lost on social critics in older countries.

No one would suggest that the frontier image was solely or even largely responsible for the social, economic, and political changes that altered Old World institutions during the dawning years of the present century. Yet, there seems little question that image bred discontent among the least advantaged classes in Europe (and to a lesser degree in Asia), and helped set in motion the alterations that eventually bettered their lot. The image-makers, whether exuberant guidebook writers, land promoters, imaginative novelists, travelers, or the homespun authors of "America Letters," helped shape the course of history, and deserve a larger place in its annals than they have been accorded.

ANARCHY AND AUTHORITY IN AMERICAN LITERATURE

By Irving Howe



A recurring theme in American fiction, writes a noted critic, is the utopian vision of a fraternal, natural community independent of society, with its artificial conventions, and of the state, with its inevitable repressions. Professor Howe traces this theme in the works of major writers of the nineteenth century and finds its echoes in writers of our own day.

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or many American writers — from James Fenimore Cooper in the nineteenth century to William Faulkner in the twentieth — there has always been a radical disjunction between social man and the natural world. The wilderness is primal, source and scene of mobility, freedom, innocence. Once society appears, it starts to hollow out these values. And not one or the other form of society, not a better or worse society, but the very idea of society itself comes to be regarded with skepticism and distaste.

This myth is lent credence by the hold of the frontier on our national life. A myth of space, it records the secret voice of a society regretting its existence, and recalls a time when men could measure their independence by their physical distance from one another, for "personal liberty and freedom were almost physical conditions like fire and flood."

Inescapably the settling of the wilderness was a violation. For a short time afterward, it was still possible to establish a precarious balance between the natural and the social—a balance which might have preserved a margin of paradise. But the forest line recedes. In Faulkner's great story, "The Bear," set in the late nineteenth century, there can still be a return to the wilderness, and within its narrowed precincts something of our original freedom is recalled. But in the twentieth century setting of the same author's "Delta

Autumn," one must "drive for hours to reach the woods...." The wilderness is gone. Paradise has been lost, again.

In American literature the urge to break past the limits of the human condition manifests itself through images of space. Our characteristic fictions chart journeys not so much in order to get their heroes out of America as to transport the idea of America into an undefiled space. The urge to transcendence appears as stories of men who move away, past frontiers and borders, into the "territory" or out to sea, in order to preserve their images of possibility. For the enticements of space offer the hope—perhaps only the delusion—of a new beginning. In America this new start is seen not so much in terms of an improvement or reordering of the social structure, but as a leap beyond society—a wistful ballet of transcendence.

Beyond Society and the State

If we look at American literature in political terms, it is a special kind of politics that is here at stake: not the usual struggles for power among contending classes within a fixed society; nor the mechanics of power as employed by a stable ruling class; nor even the dynamics of party maneuvering; but rather a politics concerned with the *idea* of society itself, a politics that dares consider — wonderful question — whether society is good and — still more wonderful — whether society is necessary. The paradox of it all is that a literature which on any manifest level is not really political at all should nevertheless be precisely the literature to raise the most fundamental problem in political theory: what is the rationale for society, the justification for the state?

And if we agree for a moment so to regard nineteenth century American literature, we discover running through it a strong if subterranean current of anarchism. Not anarchism as the political movement known to nineteenth century Europe, a movement with an established iceology and a spectrum of emphases ranging from Populism to terrorism. That has meant very little in the United States. I have in mind something else: anarchism as a social vision arising spontaneously from the conditions of preindustrial American culture, anarchism as a bias of the American imagination releasing its deepest, which is to say its most frustrated, yearnings.

Anarchism here signifies a vision of a human community beyond the calculation of good and evil; beyond the need for the state as an apparatus of law and suppression; beyond the yardsticks of moral measurement; beyond the need, in fact, for the constraints of authority. It envisages a community of autonomous persons, each secure in his own being and aware of his own mind. The anarchist vision coursing through nineteenth-century American literature speaks for a wish to undo restrictions which violate the deepest myth

— the possibility of absolute personal freedom — of the very society that has suffered the necessity of establishing these restrictions. What is novel here is the assumption that because of our blessed locale, we could find space — a little beyond the border, farther past the shore — in which to return, backward and free, to a stateless fraternity, so that the very culture created on the premise of mankind's second chance would, in failing that chance, yet allow its people a series of miniature recurrences. The stuff of tragedy is thereby transformed into an idyll of purity.

The key word is *fraternal* — the notion of a society in which the sense of brotherhood replaces the rule of law, even the best law, since law by its very nature must be unjust insofar as it raises abstract standards above personal relations. The anarchist belief in the fraternal is a belief in the power of love as a mode of discipline, indeed, in an equable relationship which may even replace both love and discipline by something still more lovely: the composure of affection.

Cooper's Sage Primitives

It is in James Fenimore Cooper's fiction that this vision first appears with imaginative strength. Cooper was deeply conservative in his political thought; but together with this conscious bias there flows through Cooper's fiction a yearning for a state of social comeliness that he saw embodied in the life of American Indians and, more persuasively, in the habits of his culture-hero, the white hunter and frontiersman Natty Bumppo.

Cooper's best fiction is set either at sea or in the forest, both areas which for him, as for other nineteenth-century American writers, suggest psychic space, moral elbow room. I shall here look only at Cooper in the forest. He is not, of course, a realistic portraitist of the Indians; some of them, in his treatment, seem more sages than savages. But if we think of Cooper's treatment of the Indians as a way of projecting an image of an ideal America, then the material becomes remarkably interesting. In Cooper's fiction the Indian tribes are never burdened with government. Within the tribe, the essential unit of social life is the family, and in many respects it is a more powerful unit than the tribe itself. Military service is voluntary: when the braves go on the warpath they act out of their own free will. Disputes within the tribe always occur among individuals, so that factions are not formed. As Cooper portrays it, the life of the Indians can be severely bound by tradition, rites, concepts of honor, and limitations of mind; but it is not subject to the institutional authority and the social regulation we associate with the state.

With Natty Bumppo, deerslayer and pathfinder, Cooper identifies more openly, for in Natty his conservative and anarchist impulses achieve a true union. Natty brings together a version of civilized decorum and the purity of natural man - precisely the unlikelihood of this mixture makes him so poignant a figure. His ideal status depends pretty much on his social ineffectuality. Propertyless as a matter of principle and self-governing through ascetic training, Natty is a monk of the woods living in fraternal closeness with Chingachgook, his Indian companion. At ease with the natural world and apart from social crowding and hypocrisy, they neither tamper with their feelings nor reduce them to ideas. Natty is the American free both from both historical sophistication and primitivist degradation. In Natty, self and society are at peace; or better yet, society becomes absorbed into self, in a truce of composure. Natty lives out the anarchist idyll of a life so beautifully attuned to its own inner needs and thereby so lucidly harmonious with the external world, there is need for neither rules nor restraints. In the experience of Natty and Chingachgook we have one of the few instances - imaginary, alas - where the Marxist prescription for the "withering away of the state" has been realized. With this ominous proviso: that you have to keep moving steadily westward as the state keeps reaching farther and farther into the forest.

Twain's Community of Equals

The vision of an anarchist idyll is given a somewhat different setting and emphasis in Mark Twain's Huckleberry Finn. When Huck Finn and Nigger Jim are alone on that indispensable raft (itself so wonderful a symbol of the isolation, purity, and helplessness upon which the anarchist vision rests), they set up a communal order transcending in value the charms of their personal friendliness. They create a community of equals, because it is a community going beyond the mere idea of equality. The idea of equality must be enforced by a state and requires that fixed norms and regulations be imposed on persons of varying needs and powers. The community of equals, in contrast, is established by persons and involves a delicate adjustment, moment by moment, to the desires each perceives in the other.

The community of the raft is a community of friends, quietly competent at the tasks of self-preservation and self-ordering. The impulse embodied in the escape of Huck and Nigger Jim is toward a freedom that can neither be confined to nor adequately described in social terms. It comes into spontaneous existence, not as a matter of status, obligation, or right, but as a shared capacity for sympathetic identification with the natural world, seen as inherently neither good nor bad but as a resource which those with the proper sense of reverence can tap. Or it can be a sympathetic identification with other men, which is something to be learned, so that the learning

becomes a way of moving past received morality.

Huck's education is an education of the emotions. And on the raft his emotions are freed because he knows that they — the people of the town, the figures of judgment, the men of authority, the agents of the state — are away. Huck Finn never reaches a conceptual grasp of the problem of slavery: what would be so remarkable in his decision to help Nigger Jim gain freedom if he, Huck, concluded that it was the right thing to do? But made in violation of social norms he accepts, Huck's decision becomes a triumph of nature over culture, anarchic fraternity over registered authority. It is, for Huck, a matter of friendliness. And in a state of friendliness, men — at least in nineteenth-century American fiction — do not need society.

The Idyll Threatened

Yet Twain was too shrewd and troubled a writer to compose a mere idyll. The precarious community of friends established on the raft is threatened at almost every moment. It is invaded by alien figures, confidence men, the King and the Duke, who are presented in comic terms but whose significance is steadily felt to be ominous. To the extent that Huck and Nigger Jim overcome them, and fend off assaults from enemies both on the river and on the shore, it is partly as a triumph of innocence, the innocence of friends, and partly as a triumph of social shrewdness.

But the stateless and innocent community of friends cannot last. For all the while Twain is making certain that we remember paradise consists of a few rickety boards nailed together as a raft; that the raft contains a runaway slave worth a sizable number of dollars; and that violence threatens at every bend of the shore. The anarchic enclave must disintegrate under the pressures of the world and perhaps, in the end, contribute to a conservative resignation. Before the world itself, Huck and Nigger Jim are helpless. At one and the same time they represent the power of transcendence, of rising above the crippling grasp of society, and the pitiable vulnerability of a boy and a slave who try to evade the authority of that society.

From Huckleberry Finn to William Faulkner's "The Bear," there is a clear line of descent. In "The Bear" the enclave of utopia is seen far more modestly, since Faulkner is aware that it is merely an enclave, "a diminished thing." By now it has been reduced from a drift along the river to an arranged vacation in the woods. The hunting trip to the woods in Faulkner's story is not a challenge to society, let alone a way of transcending it, but a mixture of refreshment and retreat. Faulkner never allows the vision of paradise to get out of hand; he never allows it to be seen as anything more than an interval in the course of our usual occupations; and therefore he does not have to face the difficulties Twain encountered once he had yielded

himself to the rait. For Twain allowed his vision to become too captivating, too heautiful, too possible — all in the face of the evidence he had accumulated to show it as anything but possible. Once you have been on a raft, no other place can matter. Huck will light out for "the territory," and no doubt become a responsible citizen; but he will now have to live, like the rest of us, within the clamps of social limitations.

The Disenchantment of Hawthorne and Melville

The first skeptical and ironic critique of utopian yearnings in American fiction is to be found in Nathaniel Hawthorne's The Blithedale Romance, a novel based on his experience at Brook Farm, the utopian community in Massachusetts organized in the 1840s by a group of American writers and reformers. Of all our major nineteenth century writers, Hawthorne was least susceptible to visions of paradise, yet as an American intellectual of his day he could not entirely free himself from the sentiments that filled the air. The criticisms ne made of this utopian community, a small-scale effort to realize Eden through thrifty New England shareholding, are remarkably ecgent. Hawthorne saw that, no matter how unstained its inner morality, an isolated utopian community could not avoid becoming part of the materialistic world it detested - a lesson that Huck and Nigger Jim also learned about their life on the raft as it is related to everything beyond the raft. The communal utopian who would cut himself off from the "ugly" world must, to preserve his utopia, become a "practical agriculturist" — which means to model his utopia on the society he rejects.

Hawthorne's criticism of the utopian impulse on the ground that it does not really succeed in avoiding the evil of the great world, struck a hard blow at the political fancies of many nineteenth century American intellectuals. In addition, Hawthorne strongly implies another and opposite criticism: that the utopian community does not bring its followers into a sufficiently close relation with the evil of the great world. For the utopian venture at Blithedale, with its transformation of political idealism into pastoral retreat, bears a thoroughly innocent air. It is an innocence peculiar to many nineteenth century American intellectuals - though not entirely unknown to young idealists of more recent times — who believed that politics, when not simply a vulgarity to be avoided, could be undertaken through proclaiming a series of moral ultimates. This innocence showed itself in no more endearing form than the assumption that ord nary politics could be gotten away from or supplanted by the politics of pastoral retreat.

A comparable sense of disillusionment appears in the last fictional work of Herman Melville, Billy Budd, a mood that is all the more

significant since his early writings, up to and including Moby Dick, are suffused with visions of anarchic bliss. The picture of a South Sea island in Typee as a tempting if threatening Arcadia; the blood-brotherhood of Ishmael and Queequeg in Moby Dick before they submit to Captain Ahab's compulsive authoritarianism, one of the most beautiful enactments of plebeian fraternity in our literature—all these are profoundly radical in stress, far more so than any mere expression of opinion. The young Melville is full of plebeian hope, utterly American in his democratic impatience with democratic constraints, pledged to a union of men that can surmount the cautions of political skeptics.

But Billy Budd reflects the mature Melville's weary disenchantment with the radical utopianism, the gay anarchism of his youthful years. It is a work in which the vision of youth is embodied in a figure at once pure and helpless, angelic and speechless, loved and doomed. Billy Budd is an archetype of innocence, but he is a creature of a utopian yearning so intense, so moving and yet so untenable in the life we must lead that Melville's mature imagination has no choice but fondly to destroy him. And what is Captain Vere, that eminently sane and decent man, but an embodiment of the cruel justice which comprises the state? Captain Vere is a man who does his duty before and above all; his duty requires him to condemn Billy to death, although the youth's slaying of a sadistic officer was accidental and viciously provoked. Melville's great perception here is that the personal qualities of Vere, notable as these are, do not finally matter: so long as he acts out of the impersonal violence of the state, his virtues as a man come to rather little and he has no choice but to be a judicial killer.

The Demand for New Values

The clash between anarchic yearning and fixed authority leads both to the marvelously open and spacious quality of nineteenth century American writing and to the choked misanthropy that so often follows. For writers caught in the utopian vision it is peculiarly hard, as they grow older, to find the modulated resolutions available to the classical European writers. Our literature is schizoid, flaring to ecstasy and falling to misanthropy, but rarely pausing at the middle level of realism and social engagement. The American myth, of which the anarchic vision is one instance, exerts too great a hold upon our nineteenth century masters; and then, as it shatters itself upon the shores of history, there follows a disenchantment beyond bearing. Where the traditional treatment of society in the English novel occurs through class adjustments, contained conflicts, even revolutions all within the shared assumption of the inescapability of social authority and visible power, the American imagination, at its

deepest level, keeps calling into question the idea of society itself. And as the nation moves into the modern world, what can that come to but absolute despair?

There is no other Western culture of the past two centuries in which, to my knowledge, so many demands have been expressed for the "creation of values." When one comes to think of it, that is really an extraordinary fact. The literatures of Europe either sustain traditional values or enlarge upon revolutionary values; but both are seen as inseparable from the social order in which the writer writes and the reader reads. Americans, on the other hand, have made the unprecedented demand upon writers that they "create values" quite apart from either tradition or insurgency. What we have often meant by this is that they establish a realm of values at a distance from the setting of actual life, thereby becoming priests of the possible in a world of shrinking possibilities. We ask them to discover, out of their desperate clarity, a vision we can cherish, and cherish perhaps in direct proportion to our knowledge that we will not — or cannot — live by it. The result, I have come to think, is that every now and again we strike off a fiction (like Hemingway's) of such transcendent powers it sends the world into enchantment, but also that we deny ourselves the possibilities of a hard realism in both our literature and our politics by means of which to transform or ease our condition.

A Continuing Dialectic

Yet, within our literature, the anarchic impulse — together with the accompanying moral ultimatism and apolitical politics — remains enormously powerful, and even those who grow skeptical as to its social value must grant that it still has a notable imaginative thrust. If one looks, for example, at the writings of Norman Mailer, it becomes clear that behind all of them lies a fear of stasis, a dread of a future ruled by functional rationality. All of his recent writings seem to ask: Is it possible that "the smooth strifeless world" in which most cultivated Americans live will prove to be a model of tomorrow, a glass enclosure in which there will be a minimum of courage or failure, test or transcendence? For those of us marked, or marred, by the ethic of striving and dissatisfaction, this question seems endlessly haunting.

AMERICAN REVOLUTION IN THE AGE OF REASON

By Henry Steele Commager



For years students of the eighteenth century have been debating the connection between the American Revolution and the European Enlightenment. It is certain that the Founding Fathers of the United States were familiar with the revolutionary ideas of Locke, Voltaire, Rousseau, Condorcet and other luminaries of the Age of Reason across the Atlantic. But opinions have differed over the extent of influence. Some argue that men like Benjamin Franklin and Thomas Jefferson were unique American phenomena; others maintain that they were imitators and adapters only. Which view is nearer the truth?

Here, the cultural historian Henry Steele Commager vigorously and vividly depicts both

the European Enlightenment and its American parallel, warts and all — and suggests a third alternative between uniqueness and imitation.

Dr. Commager is author and editor of many books in the field of American intellectual history. Perhaps his best known are The Growth of the American Republic (in collaboration with Samuel Eliot Morison) and The American Mind. He is currently engaged in a magnum opus: a fifty-volume work on The Rise of the American Nation. This article is excerpted from his recent Jefferson, Nationalism, and the Enlightenment.

y theme can be put simply and succinctly: The Old World imagined the Enlightenment and the New World realized it. The Old World invented it, formulated it, and agitated it; America absorbed it, reflected it, and institutionalized it.

Intellectually eighteenth-century America was very much part of the European Enlightenment — particularly in its English, Scottish, and French manifestations. Almost everywhere the *philosophes* embraced a common body of ideas, subscribed to a common body of laws, shared a common faith. They were all natural philosophers — what we call scientists — and if they were not all trained in science, they were fascinated by it and dabbled in it: Voltaire, who early provided a simplified Newton; Goethe, who wrote learnedly (if mistakenly) on optics; Priestley, who invented not only Unitarianism, but oxygen and soda water and wrote a history of electricity; and in

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America, the members of the Philosophical Society — Franklin, Jefferson, David Rittenhouse, Dr. Benjamin Rush — and elsewhere a Manasseh Cutler, who combined botanizing with empire building, a Hugh Williamson, who was both doctor and ethnologist as well as historian.

They accepted the Newtonian world governed by laws of Nature and of Nature's God. They accepted, too, the principle of the sovereignty of Reason, and the axiom that Reason could penetrate to and master the laws of Nature and of God, and that it could persuade men to conform to them, not only in philosophy and ethics, but in politics, economy, law, education, even in art and literature, for they knew that:

All are but parts of one stupendous Whole Whose body Nature is, and God the soul.

And they accepted Voltaire's dictum that "God has given us a principle of universal Reason as He has given feathers to birds and fur to bears." It was Reason that guided the legal thinking of Blackstone and of his greatest critic, Bentham; Reason that reorganized the national economy in Austria and Prussia along cameralist lines; Reason that provided the arguments for the Declaration of Independence. Looking back over half a century, Jefferson celebrated the animating principle of his age:

We believed that man was a rational animal...We believed that men, habituated to thinking for themselves, and to follow their reason as guide, would be more easily and safely governed than with minds nourished in error and vitiated and debased by ignorance.

From Newtonian premises there followed, logically, a passion for order that regulated almost every form of expression. "Order," their most representive poet, Pope, had told them, "is Heav'n's First Law," and they made it theirs (at least when not too inconvenient), for they yearned to be in harmony with the will of Heaven. How they organize, how they codify, how they systematize and classify, and all Nature falls into order at their bidding! Thus Linnaeus imposed a System of Nature on all flora and fauna and Buffon on almost everything else, in his prodigious Histoire Naturelle. Bentham tried to codify the laws of England; Americans for the first time systematized not only laws but rights in their constitution. Order, too, presided over the chamber music of Mozart and Haydn, the gardens at Versailles and Schönbrunn, the palaces and country houses of Eigtved in Copenhagen and Robert Adam in Edinburgh and Jacques Gabriel in Paris, order controlled the brush of Canaletto.

Commitment to Freedom

A third common denominator of the Enlightenment was both a prerequisite and a product of the first: commitment of freedom of the mind — freedom from religious and social superstitions, freedom from the tyranny of the Church, the state, and the academy, freedom to follow the teachings of science and of reason wherever they led. From this followed inevitably war upon those institutions that threatened freedom.

They knew what to do with their free minds, too. Even more than the men of the Renaissance they were launched on voyages of discovery of new worlds, new ideas, new peoples, new societies, new civilizations, new laws; new flora and fauna, new and brighter stars in the skies and new and darker recesses of the human mind, new aspects of nature and of human nature. All their most representative figures participated in this great enterprise. They sailed with Captain Cook to find new continents, or they gazed at the heavens with Herschel, who doubled the known universe, or experimented with Priestley and Lavoisier in their chemical laboratories; with Colden and Bartram and Jefferson himself they studied the American Indian. With Montesquieu and Gibbon they explored the causes of the rise and decline of empires; with Rousseau and Pestalozzi they opened up a new world of childhood.

The philosophes shared a fourth passion and commitment: a humanitarianism that imagined and fought for the abolition of torture and the amelioration of the barbarous penal code that still disgraced the statute books of even the most civilized nations; an end to the Inquisition; improvement in the lot of the peasants and the serfs; the abolition of the slave trade and even of slavery itself—all that might contribute to the enhancement of private and public happiness. It is here that the Enlightenment blended almost imperceptibly into Romanticism, for what more romantic notion than that society had an obligation to advance the happiness of its people?

Their ultimate objective was, of course, to liberate the mind and the energies of men to achieve what Providence had so clearly intended: to conform so perfectly to the laws of Nature that the errors, evils, and corruptions which had for so long afflicted mankind would vanish, and man would enter a new golden age. An exhilarating program this, but the agenda of the old world philosophes was not exhilarating; it was almost wholly negative. For the philosophes were helpless against the weaponry of the state, the Church, the Inquisition, the law, the military, even the universities, which bristled on every quarter of the horizon. These could not, in fact, be overthrown; they had to be circumvented, placated, or won over, and in most countries the energies of the philosophes were devoted to the

elementary task of survival. Before they could begin the great task of reconstruction there had to be a clearing away of censorship, the Inquisition, torture, corruption, arbitrary power — of a hundred evils, each one, it seemed, hydra-headed.

And how was this to be achieved? Not through suffrage, for except in England and Holland and some of the Swiss cantons there was not suffrage to speak of, and not much even in these more liberal countries. Not by an appeal to public opinion, for even if here and there an elitist opinion existed, there was really no way in which it could be made politically effective. Not by working through the Church or the universities, for these were an essential part of the establishment, and outside Scotland and Holland and a few of the German states the universities were moribund. No, the great enterprise of liberation and freedom, if it were to succeed, must be adopted by princes and monarches who were themselves philosophes.

Philosophers and Kings

All the philosophers, European and American alike, were trained in the classics, and all knew Plato's prediction that there would be "no end to the troubles of states, or indeed, of humanity itself until philosophers became kings in this world, or until those we now call kings and rulers, really and truly become philosophers." There were no philosophers who were kings, though Goethe may have imagined himself one, but all the kings were philosophers, or pretended to be, and if they were not, they hastened to attach philosophers to their courts so they could be respectable.

Consider the Empress Catherine of Russia. She invited Voltaire to her court, in vain. She invited d'Alembert to tutor her grandson, and when he refused to come she imported Frédéric de la Harpe, the young man who had won a prize for the best address on Peace—just what most interested Catherine! She invited Beccaria from Milan to reform her penal code, but nothing happened. She even invited Diderot to draw up a model educational plan, which he did and which she promptly forgot. And up in frozen Stockholm was the brilliant young Gustavus III. He had seized the reins of power, he had knocked Hats and Caps off hard Swedish heads, he had established freedom of the press and ended torture. He founded the Swedish Academy, he patronized poets, he adored the opera, and the muses rewarded him with immortality by turning his murder at a masked ball into just such an opera as would have delighted him.

And where the kings were not sufficiently enlightened their ministers were: the mighty Marquês de Pombal, who rebuilt Portugal after the Lisbon earthquake, and the incomparable Sonnenfels in Vienna, the son of a rabbi—think how enlightened that was of Maria Theresa! The kings indulged the *philosophes*, and the

philosophes extolled the kings: all worked together for the happiness of man.

It is all too good to be true. Alas, it is not true. The play is so brilliant, the lines are so witty, the plot is so intricate, the setting so polished, the costumes so splendid, the music so enchanting that we sit enthralled through it all. Then the last lines are spoken and the actors depart, and the lovely tunes are only an echo lingering on in our mind, and the whole thing is a dream. We look at the stage and it is no longer a stage: it is no longer the Seville of the Barber, but of the Inquisition; no longer the London of the Beggar's Opera, but of Gin Alley; no longer the Naples of Cosi Fan Tutte, but of Ferdinand IV crushing the revolution and the romantic Prince Caracciolo hanging from the yardarm of Lord Nelson's Minerva. Catherine no longer plays the role of the Semiramis of the North, and when the wretched Alexander Radischev wrote a book depicting the hard lot of the serfs, she shipped him off to Siberia; worse yet, she relegated all her busts of Voltaire and Diderot to the basement!

Now what everybody does -- cosi fan tutte -- is no longer to play at love and war. No, the bugles that sound are real bugles, and the drumbeats will soon roll across the whole of Europe. The armies march and Poland is dismembered. Now Goldoni is dead and the Venetian Republic is no more, and Wordsworth can write those elegiac lines. In faraway Quito, the patriot Dr. Espejo is tortured to death for reprinting the Declaration of the Rights of Man, and in Portuguese Bahia four radicals who called for equality in a democratic republic are hanged. Now the comedy is over and reality takes charge. In the end the philosophers were not kings, nor even next to kings: Turgot dismissed, Necker dismissed, Count Rumford expelled, the mighty Pombal disgraced, Johann Moser languishing in solitary confinement, Struensee beheaded, Brissot guillotined, Condorcet dead in that jail in Bourg-la-Reine, a copy of Horace in his pocket. The few who retained power - Sonnenfels in Austria, Tanucci in Naples, Pitt in London, for example, conveniently forgot most of their liberal principles for, like their masters, they were frightened out of their wits by the spectacle of liberalism translated from philosophy to politics.

Rule of Philosophers

All true enough, but not in America. The waves of reaction lapped at that distant shore but did not inundate it. It was Jefferson who was elected President in 1800, not Aaron Burr or Fisher Ames.

Americans had no kings, not after they had toppled George III anyway. No kings, no aristocracy, no church in the Old World sense of the term, no peasantry, no proletariat. But they had philosophers in plenty. Every town had its Solon, its Cato, and certainly — as John

Trumbull made clear in M'Fingal — its Honorius. And if the philosophers were not kings they were something better — they were the elected representatives of the sovereign people. In America, and in America alone, the people had deliberately chosen to be ruled by philosophers: Washington, Adams, Jefferson, Madison in the presidential chair. Now that we are busy celebrating the traditions of the Revolutionary era, this is one tradition we would do well to revive — philosophers as kings.

Not many of them, to be sure, could devote all their energies to statecraft or philosophy, for they were more like Cincinnatus than like Caesar, busy with farming or the law; and in any event they lacked the courts, the churches, the academies, the universities, which provided much of the patronage, the nurture, and the security for philosophes in the Old World. Yet politics and "universal reformation" were not an avocation with them, a game, as one so often senses they were in the Old World. They were a serious matter, a lifelong consecration — just what Jefferson meant when he wrote, for the Congress, that "we mutually pledge to each other our lives, our fortunes and our sacred honor."

In America, and perhaps alone in America, statesmen and philosophers were not required to curry favor with capricious monarchs or to bend the knee to power (I am not forgetting the counterargument of a capricious electorate), nor were they required to exhaust their energies in sweeping away the anachronisms which littered the landscape of history. Here they were able to translate their ideas into institutions. This is a major difference between the New and the Old World Enlightenments — that in America the people, not the enlightened monarchs or professional philosophers, were able to get on with the job, and did.

No need, here, to war against feudalism because, except for vestigial remains like primogeniture and entail, which fell almost without a struggle, there was none. No need to topple a ruling class (the exodus of the loyalists had simplified matters here, no doubt), for by Old World standards there was no ruling class, certainly none that was legally entitled to rule or to enjoy special privileges, unless you regard the whole of the white population as in that category. Neither wealth, nor education, nor family could confer privilege in national affairs, only (unfortunately) color and sex: under the Constitution adopted in 1788 any free white man could hold the office of President, Justice of the Supreme Court, Secretary of State, no matter how rich or poor, how devout or agnostic, how learned or ignorant. No need to struggle against the power and pretensions of the military, or the threat of a "standing army" — which was almost an obsession. After the treaty of peace the army stood at 840 men and 46 officers.

No need to struggle against the censorship which everywhere,

except perhaps in Holland, hovered like a black cloud over the enterprises of the philosophes — the Encyclopédie, for example — and which hurried so many of them into flight: Rousseau to England, Raynal to Holland, Voltaire to Geneva (where they publicly burned his Philosophical Dictionary), Priestley to Pennsylvania, Van der Kemp to New York. No need to repudiate a censorship which condemned the wretched Abbé Dubourg to a lingering death in an iron cage for a harmless squib called The Chinese Spy: which outlawed Tom Paine for the crime of The Rights of Man (it went through twenty-one editions in the United States without doing any perceptible harm); which, after 1789, banned all French books from Russia; and which denied Immanuel Kant the right to publish or lecture on religion. No need for all this, for there was no censorship, or none that mattered. No need to agitate for the end of torture — an end to the spectacle of Calas broken on the wheel or La Barré tortured and burned or a wretched Milanese youth tortured and executed for shouting, in a church, :"Long live liberty" — for torture was unknown to American law.

No need to campaign for the secularization of education. It was, by Old World standards, already secularized. No religious tests sifted applicants to colleges and universities (not until 1871 could dissenters attend the universities of Oxford or Cambridge), nor were there religious tests for professors. In the seventeenth century a Baptist sat in the president's chair at Harvard College, and in the opening days of the nineteenth century a Unitarian was elected to the Hollis chair of Divinity. (As late as 1862, Cambridge University turned down a professorship of American history on the ground that the incumbent might be a Unitarian!) And, needless to say, where the state universities of the Old World faithfully reflected the established religion, the new American state universities that emerged, on paper at least, in the 1780s, embraced as a matter of course the principle of religious freedom for students and faculty alike.

Everywhere in the Old World the Church shared with the crown responsibility for the minds and souls of the people. Rich, formidable, and intractable, the Church controlled almost everything it touched, and there was not much that it did not touch. It guarded the gates of universities, and would not permit dissenters to enter; it censored literature and scholarship and science, too: the Sorbonne rejected the doctrines of William Harvey, and Salamanca those of Newton, and in Denmark the Church fought some of the medical reforms of Dr. Struensee — even when he was prime minister — on the ground that they were sacrilegious. It sat on the benches of the courts, dispensed justice and injustice, and hanged Pastor Rochette for conducting Protestant services; the Anglican Establishment would no more tolerate Catholic teachers than Catholic priests in

Ireland.

Nowhere in the American colonies or states was there an established church that enjoyed power even remotely comparable to that enjoyed by establishments almost everywhere in Europe.

Religious Freedom

Consider the familiar, even hackneyed, story of the struggle for religious freedom in Virginia. There the Anglican establishment was as powerful, as rich, and as socially distinguished as anywhere else in the United States — or so it seemed. In 1776, however, Mason's Bill of Rights established religious freedom in the new states, and in 1779 the church was quietly disestablished, almost without a furor. No one in Virginia — or elsewhere in America — went to the stake for his faith; none was forced to flee to a more hospitable climate, none was ousted from his pulpit or his university, none was subject to censorship or even to contumely.

The New World institutionalization of Enlightenment principles was political and constitutional. We take that for granted but the Old World could not: statesmen there had to content themselves with Pope's admonition:

For forms of government let fools contest, What e'er is best administered is best.

They made important contributions to administrative reform, but few to politics and none to constitutionalism. The constitutions which glimmer fitfully in the literature of the day are daydreams of the philosophes: Rousseau's model constitutions for Corsica and Poland, for example, or the Abbé Mably's constitution for Poland and for American states too — he even claimed credit for the constitution of Massachusetts — or G.E. Lamprecht's curious design for an ideal government for Prussia, which assigned to the monarch responsibility for "making the citizens in every regard more well behaved, healthier, wiser, richer and more secure." When it came to making real constitutions, however, Europe had little to show. The French tried a dozen, which did not work; the Americans made do with one, which did.

There is a paradox here, one to which we are so accustomed that we scarcely appreciate it. Surely anyone looking objectively at the world of the eighteenth century might have concluded that although Americans had a certain shrewdness about local government, they did not have true political sophistication, not the kind of political talent needed for solving those intractable problems which for more than two millennia had been glaring upon mankind. Such talent, surely, was to be found in the busy haunts of men — the courts, the capitals, the great universities and academies — of the Old World,

not in some pastoral paradise such as Crevecoeur had imagined. But that is not the way it turned out. It was, in the end, Americans who proved sophisticated. How fascinating that the people most deeply committed to the principle of the supremacy of law over man should be perhaps the only one for whom the principle was not really needed, and that the people most profoundly suspicious of power in government should be perhaps the only one whose leaders seemed immune to the corruptions of power.

How paradoxical, too, that from a society of three million, with a body politic of perhaps half a million, spread thin over an immense territory, with no populous cities, no great centers of learning, and no tradition of high politics, should come in one generation the most distinguished galaxy of statesmen to be found anywhere in that century or, perhaps, since. You will remember that Jefferson made precisely this point in Notes on the State of Virginia, where he asserts with the straightest of faces that on the basis of population France should have eight Washingtons and eight Franklins. (Was it modesty that kept him from adding eight Jeffersons, too, or the realization that this would occur to all his readers?) And how astonishing, too, that the generation which presided over the birth of the Republic stayed on to direct its destinies for another fifty years!

What the Americans of the Revolutionary generation did is too familiar to justify rehearsal. What they did was to put on the road to solution almost all those great problems which had bemused and perplexed political thinkers from ancient times.

They turned to the enduring problem of the origin and authority of government, and announced that government derived its just powers from the consent of the governed, who had the right, when they wished, to institute new governments. And they proceeded to institutionalize that great principle in the constitutional convention — it was almost the private invention of John Adams.

They turned to the even more difficult problem of placing limits on power and undertook to solve it by a complex network of institutions and mechanisms: the written constitution as a body of "supreme law"; bills of rights which for the first time guaranteed substantive as well as procedural rights; separation of powers—separation rather than the British "balance"— and an elaborate scheme of internal checks and balances, including that of nation and state; and—after some experimentation—judicial review.

They took the idea of federalism, which had never worked successfully, solved its most complex problem of the distribution of powers, and its most importunate problem of sanctions, and created the first successful and enduring federal government. The British Empire had been wrecked on the rocks of colonialism. Americans, with their independence, inherited colonies as large as the original thirteen

states; they disposed of their colonial problem by the simple device — which no one had thought of since the days of the Greek city-states — of doing away with colonies altogether and calling them states.

They contrived instruments and devices for making these institutions work: an incomparably broader suffrage than obtained anywhere else in the Western world, and a broader participation in community affairs, too, than in any other communities except possibly Iceland and some of the smaller Swiss cantons. Add atop this an elected chief executive, a really independent judiciary — something no European state could boast — and, perhaps most original of all, political parties much more responsive and effective than the Hats and Caps of Sweden or the Whigs and Tories, the factions and cliques of British politics.

Nor should we forget those other remarkable innovations, or creations, quite as important in their way as the political or constitutional: the establishment of true freedom of the press; the achievement of a broader literacy than was to be found elsewhere in the Western world, and with it provision for public education which reached a larger proportion of the population than it did elsewhere; and finally a growth of social and economic equality beyond anything to be found in the Old World.

We do not commonly think of James Monroe as a spokesman for the Enlightenment, and I have managed so far without invoking his name. Yet he was a product of the same Virginia, the same William and Mary College, the same revolutionary fervor, that nourished Jefferson. Let me conclude with a passage from his first inaugural address, in 1817 as the fifth President of the United States, which came almost at the close of the American Enlightenment, a passage which sums up much of the thinking of that Enlightenment, and which has now, alas, an elegiac quality:

Never did a government commence under auspices so favorable, nor ever was success so complete. If we look to this history of other nations, ancient or modern, we find no example of a growth so rapid, so gigantic, of a people so prosperous, and happy. In contemplating what we have still to perform, the heart of every citizen must expand with joy when he reflects how near our government has approached to perfection: that in respect to it we have no essential improvement to make, that the great object is to preserve it in the essential principles and features which characterize it, and that that is to be done by preserving the virtue and enlightening the minds of the people.

THE RUCKUS WORLD OF RED GROOMS

By John F. Coppola

One of the more endearing phenomena of the current art scene is the construction—a tableau of an actual scene taken from the world about us. The constructions of a gifted artist like Red Grooms invite and yet resist easy categorization, writes John F. Coppola. Are they merely done "for fun"? Or is something more intended —mockery? burlesque? satire? There is something of all of these elements in Grooms' work, says Mr. Coppola. But, in the final analysis, Red Grooms' constructions are meaningful as sensitive and compassionate identifications of the artist with the contemporary social landscape of his country.

John F. Coppola is an artist and writer. He has had one-man shows in El Salvador and Mexico, and has published critiques of the contemporary artists Robert Motherwell and Helen Frankenthaler, and the nineteenth-century American landscape artist and writer, Frederick Olmstead.



he trouble with writing about Red Grooms is that labels keep getting in the way. At first glance, there is a tendency to call his cutout and painted sculptures figurative or Pop art; at second glance, a viewer may begin to single out expressionistic tendencies. The trouble is that none of these labels is going to stick.

Consider Grooms' Discount Store (1970), a sprawling, enclosed environment of cutout figures and objects painted in bright and clashing colors. In it the viewer encounters both customers and sales help, a sportsman trying out a shotgun and a clerk aggressively selling doughnuts. Any real similarities between the Discount Store and comparable scenes painted by the New—or Photographic—Realists begin and end with the subject matter.

Comic Book Style

Unlike the pristine and unpeopled store front scenes painted by Richard Estes, one of the leading photorealists, Grooms' store is full of life and activity. The fastidious draftsmanship and attention to objective detail that characterize so much of the current wave of figurative art is missing in Grooms' work. In fact, Grooms' style is more suited to the comic pages.

That fact, too, is misleading, since it does not establish a bond between Grooms and Pop art. Style aside, Grooms, in a work such as Discount Store, is not concerned with exploiting mass-produced design the way Andy Warhol was in his paintings of soup cans or Brillo boxes. Most Pop artists are too intent on demonstrating the banality of mass culture to be as tolerant of its foibles as Grooms is.

Discount Store sprawls over fifty-six square meters of space, and can best be appreciated by wandering through it, the viewer modifying his impression with each new vantage point. But these shared characteristics of scale, time and spontaneity are, at best, a tenuous link to the abstract expressionistic tradition. The wry humor of Grooms' work has little in common with the melancholy and rather pretentious emotional subjectivity of expressionism. Robert Motherwell, himself both a leading abstract expressionist painter and one of the movement's theoreticians, has described it as:

a response to modern life [that was] rebellious, individualistic, unconventional, sensitive, irritable...This attitude arose from a feeling of being ill at ease in the universe...Nothing as drastic an innovation as abstract art could have come into existence, save as the consequence of a most profound, relentless, unquenchable need.

On the contrary, to look at Red Grooms' work is a "fun experience," but calling it fun also pins a label—and another misleading one—on it. Taking fun as merely fun and seriousness seriously is to misunderstand both the one and the other. Grooms' constructions are enjoyable because they are familiar, not in the sense that they're repetitive or derivative, but because they make us see and appreciate (sometimes for the first time) that which surrounds us. But people who laugh at the jibes of Grooms' art and then paradoxically question his seriousness as an artist because they do laugh, overlook the fact that Grooms' wildest fantasy and broadest slapstick humor are based on a precise conscientious observation of contemporary American society.

Tolerant Commentary

If Grooms depicts American society in the twentieth century—its cities, its discount stores, its movie stars—the reason is that he is infatuated with that society and wants to preserve it. If, in the process, he manages to give these portraits a comic twist, a Duchampian moustache, it's because Grooms is something of a satirist, a commentator on our foibles; above all else, however, he is a conservationist of contemporary life-styles and their material

fixtures. Grooms expressed this attitude quite clearly in a ten-yearold work, Loft on 26th Street, a two-meter wide re-creation of his former studio loft in New York City.

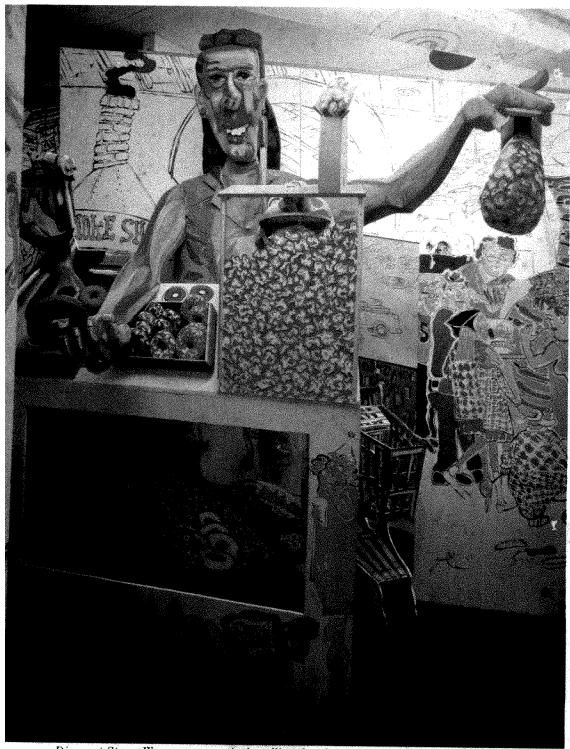
"When the luncheonette on the ground floor burned in the summer of 1964, we knew our days in the loft were numbered. So I started building a scale replica of the place," he recalls. Packed with figures of his friends, his wife and himself, as well as their books, pictures and furniture, *Loft* took seven months to complete. "I had a strange feeling about it—as if the place were really me," Grooms says.

The Wry Details of Life

The scale may vary from that of an apartment to a store to an entire city, but all these locales are part of Red Grooms' world, and he invites the viewer to see them through his eyes. Seeing them through his eyes, with the artist's focus on the wry details of contemporary life, makes us more appreciative participants in what is our world as well. Grooms' contribution to our visual literacy is, in the process of conserving the folkways of the present, to make us



Chicago: An artistic atmosphere agreeable to comic humor.



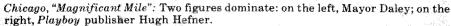
Discount Store: Woman, aggressively selling doughnuts.

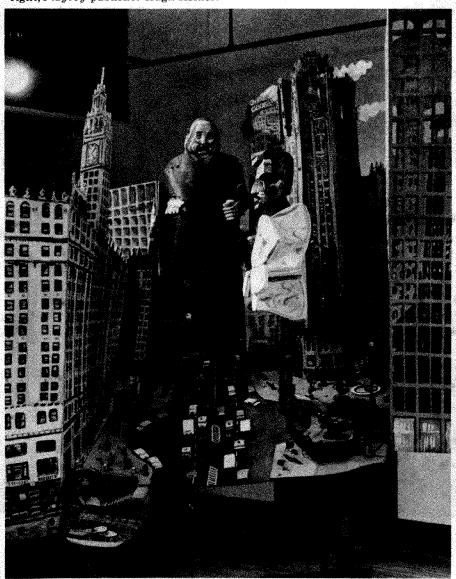


appreciate the vitality of the society and the people and forces that have created them.

Thus, Chicago has long suffered from a reputation as a gray and uninviting city, one forever doomed by a collective inferiority complex to be America's Second City, after New York. That reputation is far from an accurate description of that earthy and vital city; Grooms attempted to change the city's image in *The City of Chicago* (1968), one of his largest and best constructions.

In 1967, Grooms spent eight months in Chicago, where he had previously studied at the School of the Art Institute. He found the





artistic atmosphere agreeable to his comic humor and, in a ten-week period, conceived and executed *Chicago* with the help of three assistants. The construction covers fifty-six square meters and had to be abridged for its showing at the Venice Biennial the next year.

Chicago encapsulates the history of that city, from its days as a town best known for its stockyards to the urban skyscraper center of today. The work is a helter-skelter combination of the city's past and present mythology, portrayed with the lighthearted sophistication and even show-offishness that characterize Grooms' work. It's all there: Mrs. O'Leary's cow, which supposedly kicked over the lantern that started the great fire of 1871; Little Egypt, the belly dancer who scandalized and delighted visitors to the 1892 World's Columbian Exposition; Al Capone, the gangster who terrorized Chicago in the 1920s and ended up something of a folk hero.

Art that Savors

Two figures dominate the environment. Richard J. Daley, the city's mayor for more than twenty years, is in many ways the epitome of the city he heads. He's rough around the edges, fiercely proud of his traditional values and lack of sophistication, and boss of one of the country's most efficient and effective political machines. He glowers out, across The City of Chicago, at a large figure of Hugh Hefner, publisher of Playboy magazine, the suave, worldly antithesis of Daley's life-style.

Grooms' Chicago is a mobile, tactile, noisy place. The elevated railroad screeches on its tracks, Daley sways across the landscape; in short, it does everything that "the brassy, breezy town" of song should do. And the construction is probably one of the most precise depictions of what it feels like to be part of that city.

Grooms' constructions grew out of the artist's experience as a pioneer of "Happenings" in the mid-1950s and early 1960s, when Grooms made his appearance on the New York art scene (after trekking through Peabody College in his native Nashville, the Chicago Art Institute, the New School for Social Research in New York and Hans Hofmann's School of Fine Arts in Provincetown, Massachusetts). The Happenings were collaborative events in which an artist might combine human dancers, short films, spoken words, and crude, sculptured sets; they depended on audience participation, much improvisation and fortuitous events for maximum impact. Happenings were an important force in propelling modern art beyond the limits of the canvas and into multimedia environments.

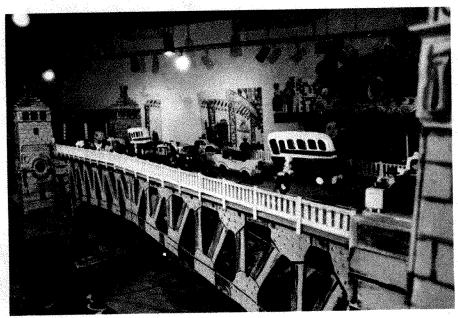
When viewed as collages of people and objects in action, the Happenings are a natural antecedent to Grooms' constructions. If the constructions were a logical step, so is Grooms' interest in

moviemaking, movies being both influence and outlet for him. Grooms has long been fascinated by the movies, and once worked as the head usher at the old Roxy Theater in New York City. Many of his constructions have depicted film stars and scenes from old movies—and what better symbol is there of the society Grooms celebrates? One construction, *Palace in Babylon*, is a cardboard mock-up of a set from D.W. Griffith's classic 1916 film, *Intolerance*, right down to the chariots, dancers, spearbearers and potentates, amid potbellied columns topped by trumpeting elephants.

Grooms' constructions have also served as movie sets. The City of Chicago was the locale for his movie, Tappy Toes (1969-70). The movie was intended to explore the construction on film, much the way a viewer walking through it would, but it turned into a take-off on the Busby Berkeley movie musicals of the 1930s, "extravaganzas" with song-and-dance routines. Grooms has made six movies to date; perhaps foremost among them is Fat Feet (1966), for which Grooms built all of the sets, from tenement apartment houses to fire hydrants. The film uses a reverse animation technique in which real people are made to look and act like comic strip characters. Fat Feet is based on Edgar Allan Poe's short story, The Man in the Crowd; in that story, the narrator, struck by the face of a stranger, follows him day and night to no destination until he realizes that he has been following the very spirit of the Metropolis.



Chicago, The "El": A mobile, tactile, noisy place.



Chicago, "Michigan Avenue Bridge": What it feels to be part of the city.

Critic Harold Rosenberg noted that the film was executed in a lighthearted, sophisticated manner that belied its painstaking craftsmanship. "As human actors wearing Grooms' enormous papier mâché shoes mingled on the screen with his cut-out props and figures against the painted stage sets, the effect had the charm of a puppet show when the puppeteer himself rises into it like an unreal giant of flesh," he said.

The World as a Comic Mirror

For all of Grooms' identification with the fancifulness and fantasy of the movies, not even the magnates of the silver screen could have invented the subject matter for Grooms' 1971 construction, *The*

1966 "Large Red Fire Engine": A lighthearted sophisticated set for Fat Feet.

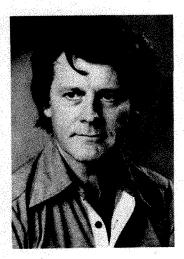
Astronauts. Grooms went to Cape Kennedy to watch the launching of the Apollo 15 moon mission and later did a four-meter-tall construction of the two astronauts on the moon. In the construction, David Scott contemplates the lunar landscape, while James Irwin waits in a rickety moon vehicle. Nine helpers aided Grooms in creating this construction out of acrylic paints, gesso, canvas and foam rubber over a skeleton of wood and styrofoam.

In *The Astronauts*, Grooms recreates a visual experience that had become common to everyone from television, movies and still photographs. Reflected in his own special comic mirror, the events combine science fiction and caricature without any loss of the stupendousness, the marvel of the moon landing. If anything, Grooms' touch renders the event all the more real, more accessible.

In large-scale works such as Astronauts, City of Chicago and Discount Store, Grooms has shown himself to be one of the most inventive and imaginative interpreters of contemporary America. His imagination seems to be matched only by his sympathetic understanding of the social forces at work. He points, he parodies, he caricatures, he satirizes society's foibles. He laughs about them, and we laugh with him. This is his world, too, and he invites the viewer to partake of it and to enjoy it.

GEORGE CRUMB: THE POETRY OF MUSIC

By Donal Henahan



Contemporary serious music is regarded by the hoi polloi as an esoteric exercise in sound effects, composed by and for musicological specialists. This music seems to the layman to be based on abstract scientific principles whose results amaze and startle but rarely delight — much less entertain — the unwary listener. Not so the music of George Crumb, asserts a veteran reviewer and commentator. Crumb's compositions, he notes, have won the plaudits of both the learned and the ignorant — yet the composer is firmly within the avant-garde tradition. Donal Henahan explains why.

Mr. Henahan is a music critic for *The New York Times*, whence this article is taken in an abridged form.

Although there are dissenting voices, music critics as well as ordinary listeners have been acclaiming George Crumb with a rare show of agreement. The American composer's recent works, such as Ancient Voices of Children and the Makrokosmos series for amplified piano, have been greeted in rhapsodic terms—"poetic," "atmospheric," "mysterious," "evocative"—not often applied to modern music. The veteran music critic Harold C. Schonberg summed up the response: "In recent years, George Crumb has been talked about, and praised, more than any other composer of the American avant-garde." Taking the stance of mystical poet, Crumb has become a pivotal influence in American musical development during a period when science—or at least the apparatus of science—has lorded it over art and intimidated many artists.

What is this singular music that can draw to it ardent support both from sophisticated observers of the avant-garde and from concertgoers to whom modern music is usually a closed book? And who is this strange musician?

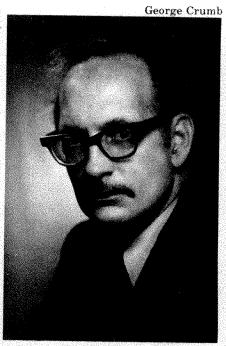
George Crumb himself seems on casual acquaintance an unlikely fellow to have stirred up the avant-garde musical community. A forty-five year-old professor of composition at the University of Pennsylvania, he is almost desperately reticent about himself and his work. When required to take bows after a premiere of one of his works, he usually sits near the rear of the hall and accepts applause by bobbing up and down a couple of times while holding up a hand as if to plead for clemency. He also rejects any suggestion that the technical devices in his scores are his inventions. As he himself hears it, his music is a mixture of influences that include the lean textures of Webern, the nostalgic allusiveness of Mahler's popular tunes, the "night music" mood of Bartok, and the vocal technique of Sprechstimme (half-speaking, half-singing) from Schoenberg's Pierrot Lunaire.

Mountain Influences

Crumb's West Virginia mountain origins are drawn upon heavily in his music, and he often seems to make a point of dropping in references to his native state. In the Pulitzer Prize composition, Echoes of Time and the River, there is a disturbingly enigmatic phrase that turns up again and again, croaked and whispered by the players: Montani semper liberi. It turns out to be the state motto of West Virginia and means "mountain men will always be free." In Ancient Voices, keening sounds are produced by a musical saw, bowed in standard mountaineer fashion. In Makrokosmos III a percussionist blows foggy, hooting tones on a stone jug. There is a banjo in Night of the Four Moons, and in Songs, Drones and Refrains of Death an electric guitar is played "bottle-neck style," by sliding a

glass rod over frets in the manner of hill-country musicians. The same work calls for "a small highpitched jew's-harp" and "five water-tuned crystal glasses." Crumblikes to take the banjo part in performances, though he denies he can "actually play" the instrument (he was trained as a pianist). He sometimes fills in as a percussionist, too, chiefly because "they seem to enjoy themselves so much."

But the ramifications expand beyond the boundaries of West Virginia, the Appalachian mountains and the suburban, professorial life. Crumb delights in quoting or otherwise calling up the past, as if he were the Marcel Proust of Western music. He



creates an unforgettable effect in Night of the Four Moons, which ends with an alto voice singing offstage "in the style of Mahler." Other scores quote snatches of Chopin's Fantasie Impromptu, a Bach fugue, Beethoven's Hammerklavier Sonata, Schubert's Death and the Maiden and Ravel's Bolero. Again, nothing very revolutionary about this: quotation has been one of the composer's standard tools for centuries. But Crumb uses the technique so deftly and with such sure instinct for dramatic impact that one can experience not only a twinge of nostalgia but something like the sense of irretrievable loss that arises when one leafs through an album of family pictures or yellowing snapshots of half-forgotten friends in half-forgotten wars.

Though anything but a blusterer, Crumb is at the same time unusually confident about his work and displays little doubt about where he is headed artistically. But in his comments, he chooses to stay close to bare musical facts. Certainly he is reluctant to admit his extramusical fantasies into public discussion. After a long question about a peculiarly impersonal and ethereal quality that permeates some of his pieces, Crumb will offer, "Well, I guess I've been influenced a lot by electronic music."

This reluctant poet of moonlit dreams and Blake-like visions hides behind the facade of the university professor, cleverly disguised in graying mustache and black-rimmed glasses. Yet, what is important to know about Crumb is revealed in the music, as in the anger and terror that rush out of Black Angels, for example, a piece written in 1969 and 1970 at the depths of the Vietnam war. Or the suggestions of lost innocence, lost faith, lost tradition called up by the distant whistling of an Appalachian hymn tune ("Will There Be Any Stars in My Crown?") in the "Night Spell" movement of Makrokosmos I.

A Continuing Confusion

Facile paradoxes of all sorts suggest themselves when one considers Crumb. Although an academician in the highest standing, he is a continuing confusion to many of his colleagues, and to some of the old guard even an embarrassment. In the last fifty years, and particularly since World War II, composers have been required to write abstract, mathematically neat music to be admitted to the academic inner circle. With Crumb and a few like-minded composers, however, instrumental color and repetitive techniques have again come to the fore, and the pretenses to scientific rigor and serial precision have been seriously questioned.

Some excellent musicians, though they respect his craftsmanship, tend to be upset at Crumb's reliance on simple structures and what sometimes seems his limited artistic vision (the similarity in technique and mood of many of his works is quite noticeable). Conserva-

tives are suspicious, too, of Crumb's penchant for theatricality (his darkened stages, his players in masks, his chanting pianists), and what they seem to fear as a return to medieval obscurantism and necromancy. Crumb does base Black Angels on numerology, with an interlocking complexity that Merlin the Magician himself might admire. Also, Makrokosmos I is subtitled "Twelve Fantasy-Pieces After the Zodiac for Amplified Piano," and it assigns a zodiacal sign and characterological enigma to each section. Are we supposed to take all this seriously, the doubters ask?

Most artistic paradoxes, however, are more apparent than real. The science of modern composers is based to a greater extent than some of them would admit on numerology and magic. Intuition is still the real composer's truest guide, and whatever their convictions about rationality, one can discern in the closely calculated scores of Milton Babbitt, say, or Elliott Carter, the same reverence for number and form that inspired Pythagoras and his mystical "music of the spheres." Similarly, the music of Crumb, while avoiding certain conventional tools such as counterpoint, is as tightly organized and internally consistent as any Pythagorean theorem. The best music always results, as Alban Berg put it, from "esctasies of logic."

Crumb may protest, and does, that "I don't know anything about mathematics or physics — I just let my ear be my guide." But like any composer, he has been speaking physics all his life without knowing it, as M. Jourdain in Moliere's play discovered about his prose. Thus, in *Eleven Echoes of Autumn*, 1965, the first section, for piano, is based entirely on the fifth note in the harmonic series. The second section is made up of violin harmonics combined with the sixth overtone, produced by rubbing the piano strings with a piece of hard rubber. Music is one of the physical sciences as well as one of the metaphysical ones.

Using Primitive Forms

Crumb's use of simple musical forms, which so bothers some of his colleagues, is an expression of his belief that

the sophisticated forms, the forms that grew out of tonality [sonata, symphony and so on] no longer work. But the primitive forms such as song form or variations are still useful.

In his own teaching he encounters great confusion. "Young composers don't seem to know what to do or who are the guides anymore, When I was in school, it was easy — Webern, Schoenberg, Berg, Bartok, Hindemith and off to one side, Stravinsky. Now they think, maybe it's Varese, or may be not — they really aren't sure." Crumb

himself is strong in his admiration for the work of such different colleagues as Elliott Carter and George Rochberg. He feels Carter does his best work in the traditional forms and with traditional instruments. "I especially love his String Quartet No. 1."

As a teacher, Crumb works in a way that students have called "low-key." According to Richard Wernick, a fellow composer at the university and chairman of the music department, by the end of the term, Crumb's students wind up knowing "an incredible amount about music without realizing how it happened." Some students, inevitably, try to write like Crumb, but he discourages that. Unlike other teachers, such as Schoenberg or Milton Babbitt, Crumb seems antipathetic to the idea of gathering a school of admirers around him. Like other composition teachers at the university, Crumb meets privately with each of his students and in addition leads a seminar or teaches one class in, say, nineteenth-century harmony each semester.

The Emergence of a Composer

Crumb himself began composing, he recalls, at "around ten or twelve, because my father was a band conductor who played the clarinet and my brother was a flutist. I wrote my first piece for them." His compositions before 1954, when he produced what he regards as his first mature work (his String Quartet), were solid and workmanlike, but attracted no attention outside the tight little world of contemporary music. His Variazioni for large orchestra, written in 1959, adopts a twelve-tone theme, and now sounds rather like Schoenberg even to Crumb.

The twelve-tone method of composing, generally identified with Schoenberg in spite of his insistence that he did not mean to lay it down as a method, is a specific case of what is more generally known as serialism. A serial composition is based on a specific sequence or row of tones (not necessarily twelve) which serves as a matrix for controlling the development of the entire work. In the 1950s, when Crumb was finding his way as a composer, avant-gardists like Milton Babbitt in this country and Pierre Boulez in Europe were extending the serial idea beyond rows based simply on pitch, into dynamics, tempos, expressive markings, and other "parameters."

The master to whom the serial school looked was Anton Webern, who died in 1945, but whose works pointed the way to this totally organized musical future. Virtually all composers of the post-World War II period, whether they followed Webern's serial logic or not, took something from him: Crumb's debt shows in his concern for economy of ideas and delicate nuances of dynamics. What was called the post-Weber serial revolution bred within itself a counter-revolution, one of whose guerrilla leaders was George Crumb.

In the last twenty years, Crumb has written about twenty works, but it was not until 1971 that his importance was recognized. Since then, his scores have circulated widely, and virtually all of them have been recorded.

A Search for New Sounds

A sophisticated listener, after the first, usually captivating, encounter with Crumb's music is likely to turn cautious: The very sensuousness and fragile beauty of the sounds is such that an experienced ear may suspect the charm is only skin deep - piquant sonorities and little else. Crumb's obsessive search for new sounds is one of the points that dogmatists of the pure-music creed find disturbing. And the man obviously does take uncommon delight in tickling fresh sonorities from as weird a collection of noise-producers as any that a composer ever gathered into his scores. The studio in Crumb's home may, at any one moment, resemble a warehouse of exotic instruments, if not a hardware store. "The strangest things keep going in and out of there," says his bemused wife, Elizabeth. If one day she were to discover thimbles missing from a sewing kit, they might well have disappeared into the studio - in several of Crumb's scores rapid tremolos are played on violin, banjo or piano strings "with thimble-capped fingers," producing a chilling ghostly effect.

Understandably, most discussions of Crumb's work begin to sound like litanies of picturesque instruments and striking sonorities. But he is no tinkerer for tinkering's sake, and critics are almost always astonished to discover that his odd devices and sounds are integral to his deeper meaning, not experiments in the usual avant-garde sense. His sonorities have been chosen with keen selectivity from the vast repertory of sounds available to the modern composer, always with an ear to expressing some personal vision, mood or emotion. At the end of *Eleven Echoes of Autumn*, 1965, for example, he requires the violinist to play with the bow's hairs slack, to achieve a gray, mournful timbre.

Or consider Echoes of Time and the River, the big orchestral piece that won Crumb a 1968 Pulitzer Prize: Wind players whisper and croak into instruments, the violin sections whistle chords, and platoons of musicians march about in solemn processionals, so that orchestral sonorities are continually, subtly shifting in perspective and balance. At times in Black Angels, a grim shocker for amplified string quartet, the two violinists and the violists play disembodied tunes by drawing bows across the lips of partly filled crystal water glasses. A light chain is laid across the piano strings in Makrokosmos I and allowed to jingle throughout one movement, setting up all sorts of unpredictable (to the listener, not to the composer) over-

tones and celestial melodies. Night of the Four Moons calls for an international percussion kitchen that includes antique cymbals, Chinese prayer stones, an African alto thumb piano, and Japanese Kabuki blocks.

Pictorial Scores

Beyond the exotic instruments and peculiar sonorities, Crumb's music is attractive in other ways that make it suspect to some skeptics. His hand-drawn, exquisitely calligraphed scores are visually striking in an almost painterly way, for instance. Thus, in several works there appears a phrase drawn from a Lorca poem, "y los arcos rotos donde sufre el tiempo" (and the broken arches where time suffers); at these points the music is symbolically notated in the shape of broken circles or arches. The movements called "Magic Circle of Infinity" and "Spiral Galaxy" in Makrokosmos I also are written in circles, and Crucifixus is notated entirely in the form of a cross. Those who know about the history of such symbolic notation will recognize Crumb's homage here to baroque pictorialism. Bach loved to write his music in the literal shapes of waves and serpents, or graphically to represent laughter, the ringing of bells, sobbing grief, and so on.

Crumb's scores also go somewhat against the modern objectivist grain in their unashamedly poetic directions to players. Although the effects Crumb wants to achieve might seem to be assured by his remarkably precise and detailed use of standard notation—there is little left to chance in his writing—he offers in addition instructions so extravagantly literary that a musical purist could be put off without listening to a note.

Crumb is a canny artist, however, and upon close examination all his strange devices work toward some larger musical point. He has been careful, for instance, to have specific interpreters in mind when composing most of his works, people who are not only exceptionally skilled in performing difficult modern scores but who are also attuned to the deeper meanings in his scores. Jan DeGaetani, the matchless mezzosoprano whose name was made internationally by her gripping interpretation in Ancient Voices, is the ideal Crumb musician, a virtuoso who is also sensitive enough to be stirred by the penumbra of associations surrounding each of his pieces. Such a performer responds in ways she hardly could explain to the composer's mood-setting instructions and expressive suggestions. When pianist David Burge received the score of Makrokosmos I from Crumb in November of 1972, his first reaction was shock. "Its appearance was staggering," he recalled recently, "every page demanding the closest scrutiny, each new title calling forth reactions of a supramusical nature from all the senses." But

Burge set doggedly to work, "playing, strumming, singing, plucking, shouting, whispering, scraping, whistling" (anyone who wants to play Crumb must be the total musician), and now, he says, "many, many performances later, I still marvel at this gigantic, personal, incredibly moving piece of music."

Divided Listeners

Many musicians are puzzled in their first reactions to Crumb's music. In traditional academic terms, there seems surprisingly little in Crumb's scores that could be taught or learned. Some typical reservations about them were summarized in a report to the English periodical *The Musical Times* by the American critic Patrick Smith:

Crumb's recent music has sharply divided listeners into those who see his combination of simple syntax, inflated philosophical titles and extremely fine-tuned ear for sonority as a drying up into gesture of a once-promising composer, and others who find in the music a variety of shifting and haunting moments whose sum is out of proportion to the parts: a self-contained musical language of immediate and lasting emotional power. I am in the latter camp.

There is, at any rate, little uncommitted comment on Crumb. People take sides, as they should over any possibly significant artist. What seems a nightmare to one listener is a lovely dream to another.

Significant new music takes many guises, of course, and not all of it must be evocative in the manner of Crumb's—just as not all great poetry is lyric poetry. But as a counterpoise against the obsession with structural intricacy and mathematical clarity, his work over the last decade adds up to an impressive achievement, comparable to that of Charles Ives, or Aaron Copland, or Elliott Carter.

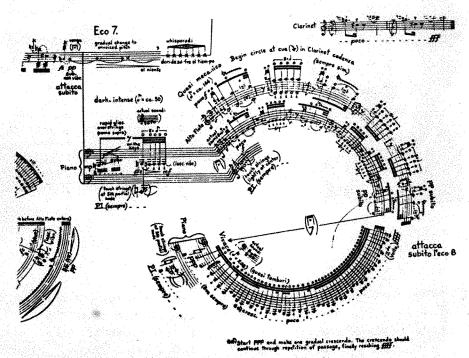
Theoreticians and Artists

The philosopher and esthetic guide of the postwar musical generation was Theodor W. Adorno, the brilliant German critic. It was Adorno's contention that musical composition is determined largely by historical forces, and that at any one time history presents the composer with one problem, for which there is one valid solution. The composer's only mission is to solve this problem, and anyone who does not try can be dismissed as a mere entertainer. The problem of our time, in Adorno's view, was the establishment of the twelve-tone system as expounded by Schoenberg and refined by Berg and Webern, to replace the dying tradition of tonality. Seen in this light, writing music became a monastic discipline for true believers, and music itself a tool for social and political change.

Adorno's theory, I believe, is a kind of mandarinism or pedantry

carried to ludicrous extremes; it places a heavier burden on human rationality than that thin reed can be expected to sustain. The more pragmatic approach may be to recognize that we never know where music is going until it has gone there, and that the goals of art are defined by artists at work, not by theoreticians.

The success of Crumb's music with both sophisticated and untutored listeners suggests that the problem to be solved by composers today is not how to fall in step with some golden future projected by science or history, but how to get back in touch with their own artistic instincts. Beethoven, who enjoyed some success at composing, referred to himself as a "tone poet." The best of George Crumb's music suggests that there still is something to be said for that proud attitude.

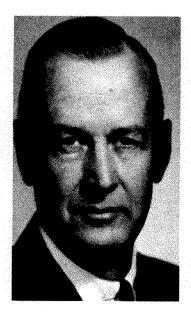


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The University and Society

IS THE UNIVERSITY AN AGENT FOR SOCIAL REFORM?

By James A. Perkins



A common expectation nowadays in both new nations and old is that their universities can play an important role in curing the ills of society. Where these expectations come from, why they are so frequently frustrated, and to what limited, yet important extent they can in fact be realized—these are the themes of this article by a world-famous American educator.

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he idea of the university as an effective instrument of social reform has been dangerously exaggerated. Perhaps the success of scientists in conquering time and space has led social scientists and humanists (and even academic administrators!) to the false conclusion that they could, with equal effect, direct the development of man and society. It may be that the public has, therefore, been led to expectations for social salvation that have not been and cannot be fulfilled. The universities that house and advertise these promises have consequently been indicted for nonperformance. Disillusion and disruption have followed, and the university is today in grave danger.

There are five ways in which the university may be involved with social reform:

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- direct action or specific positions taken by the university as a corporate institution;
- social policy pursued indirectly as a by-product of discharging normal university responsibilities;
- social change that naturally flows from work of university professionals allied with other professionals;
- the influence for change exercised by the university as a free community, constitutionally concerned with what could be rather than what is:
- the educated university graduate—the most potent of all influences for change.

University as a Corporate Institution

Let us turn to the first level of intervention—the university as a corporate entity. It is at this level that expectations have far outrun performance, and it is critically important to bring the university as social reformer down to size.

It must be acknowledged that the university has more often been an agent for stability and the status quo than for change and reform. Traditional societies have been careful to see that university education was largely confined to the ruling class. At most it was open to those who would accept the norms and values of the ruling class. And, in any event, the classical content of the curriculum was not such as to foment revolution.

In modern times, also, the university has been looked upon as an agent for stability rather than for change. The responsibility for maintaining and refurbishing the cultural heritage, for adding to the existing body of knowledge, for preparing for employment, and for living a life in the here and now—all this is essentially conservative.

But the universities do have a more positive role as an agent for reform in those societies in transition from colonial status to national independence, or from agricultural to technical-industrial stages. In these cases the university becomes both the symbol and the fact of national cohesion and national identity. Once the transformation has taken place and a new consensus has emerged, the university once again assumes the role of agent for stability and social control—although with a vastly different curriculum more relevant to the current scene. It is no accident that the early colonial university colleges were designed and administered to support the position of the colonial power. Few were established to encourage independence from the founders. It is equally true that once political independence was established, the universities were redesigned to help make that independence secure. Perhaps the world would have been better off if both colonial powers and the new states viewed

the universities as agents for continuing social reform. But there is little evidence of such a larger view.

There is a second limitation on the university's reputation as an agent for social reform. The university is as much an object of reform as it is an instrument for reform. In other words, the instrument is shaped by the very object it is supposed to affect. It is changed as society changes. Its structure, governance, curriculum are modified to meet society's needs and new priorities. Cause and effect, in these circumstances, are not to be readily determined. Recognizing the reciprocal relationship will, at least, add a certain touch of humility and realism to claims and expectations.

There are some who would deny this interdependence. They would have us believe that the university grows and develops from its own internal dynamics. Societal connection, let alone dependence on society, is, so the argument runs, one of those Philistine ideas dreamed up by those insensitive to the nature and spirit of the intellectual enterprise.

Interaction with Society

The proposition cannot be taken seriously. Society created the university, and there is a continuous interaction to assure that the purposes of society and the missions of the university are always kept in a state of related tension. Classical education directly served an elite society dominated by prince, bishop and a landed aristocracy. Liberal education broadened and modernized the classical heritage to embrace new fields of knowledge that were of interest and use to the new middle class. General education was the pedagogical response to a society looking for a cohesion shattered by two world wars and the increasing fragmentation of knowledge. Graduate education arose as the pursuit of knowledge required more extensive and sophisticated arrangements. Professional education became necessary as the application of knowledge became as important as its pursuit. And academic administration grew in response to the complex institutional tasks and the need for institutional change that faculties were increasingly unable or unwilling to handle.

But of course we know that the university and society are involved in a close, reciprocal relationship. In the long run (and sometimes in the medium run), society gets the university it needs. And at the same time the university instructs society on what society would want if it were wise enough to ask for it. From this point and counterpoint the university gets less than it wants, and society probably gets more than it deserves.

We have now shown that the university is conservator as well as reformer and is influenced as well as influencing. It is be-

coming positively less dangerous by the minute. It is also becoming more recognizable—and that is helpful. We are now ready for a third observation.

The university is perhaps the least powerful of the many institutions that will inevitably be involved in a social action. This statement contains a major and a minor point. The minor point is the obvious one that social reform requires the participation of many organizations. Consequently, the university can neither claim credit nor accept blame for primary responsibility with respect to any particular action or result.

The major point has to do with the *capacity* of the university as an agent to exercise influence. A recent report from Yale stated the matter gently when it said that "(the university) is not particularly well organized as an institution to render social and moral judgments and to act upon them." That may well be the understatement of the year.

Universities do not always agree among themselves. Consequently, neither politicians nor the general public have any clear notion as to what the universities have in mind for the general welfare. Those in charge of our political life often complain that the universities sound like a discordant orchestra without a conductor—even on matters close to their own interest—let alone on more general public policy issues.

Autonomy Within the University

This institutional independence finds its counterpart in the relations between departments, institutes and faculty within the university. At the institutional level the banner of independence spells autonomy, while at the professional level it spells academic freedom. We must remember that the individual professor—teaching his class, writing his book, or minding his test tubes—is the basic building block of the whole academic institutional system, which has been designed both to support and to protect these activities. Small wonder that the professor finds independence more important than cooperation, accepts disagreement as a tolerable state of affairs, and resists as hostile and dangerous notions the ideas of the general will and institutional consensus. A professor is, as Carl Becker has said, a person who thinks otherwise.

The university as an institution has at its core a constituency prepared to resist vigorously the very idea of a university position on anything. The professoriat will recoil from the twin strategies of persuasion and compromise so essential to the management of change—let alone reform. The academic can never be an enthusiastic proponent for a statement or cause that is posed as only the best alternative, nor for one in which he only partially believes. Com-

promise is not part of the classroom ethic, let alone the discipline of scientific research. The academic tradition does not embrace the values necessary for successful institution building.

Direct university intervention in society not only cuts across professional independence and academic style but also cuts across a hard-won social compact that gives freedom and autonomy in return for institutional neutrality. Thus at the institutional level, the university has come to know, though it sometimes forgets, that intervention in society is not a one-way street. What is one person's exit is another's entrance. The president or vice chancellor who takes to the streets or appears on the barricades may find that he has been followed home. The students who pulled up the paving blocks in Paris had to dodge tear gas in return. The rector who led a protest in one South American country had the army on his campus three days later.

There is another, sometimes neglected, edge to the issue of neutrality. The current pressure on universities to take stands on social issues is premised on the notion that the institution will support the "correct" position. As Fritz Machlup has noted, there is a naive assumption "that academic bodies...would always be on the side of the angels and would, by overwhelming majority if not unanimously, give their learned endorsement of resolutions in favor of the true, the good, and the beautiful." Yet, at least under totalitarian regimes, such endorsements, if given at all (as they apparently were in Nazi Germany), may support national policies that are opposite of the good, true and beautiful.

For all these reasons the university in its mode as an institution is not likely to be a powerful and effective direct agent for reform. The notion of autonomy precludes any automatic agreement among universities. The doctrine of individual responsibility, protected by the ideas of academic freedom and tenure, precludes the forging of a strong consensus for effective influence and action. And the very nature of learning and the advancement of knowledge is private and inward, not social and outward. So much, then, for direct intervention by the university as a corporate institution.

Social Change — A University By-Product

We can now move to a more productive avenue of university influence for social change and reform, namely, influence that is exerted as a by-product of normal university activity. A university position on apartheid might be difficult to arrange, but the establishment of fellowships for South African refugees may be easy to arrange and could be an even stronger signal of university sentiment. A university community can provide considerable elbow room for concerned members to work through established channels.

A controversial and very perplexing issue is whether the university should consider the social policies of the business corporations with which it deals. Should it buy food from producers who pay inadequate wages? Should it purchase the paper of companies that are polluting the rivers? Has it any responsibility for considering matters other than the quality of the service rendered? Should the university use its position as buyer or investor to influence the social policies of private corporations?

A more important case of indirect influence that comes closer to the academic heartland is that of admissions or access to higher education. Traditionally, university entrance was and in most countries still is, determined by secondary school exit, but only from those secondary schools that have university preparatory programs. And in many, if not most cases, entrance to proper secondary schools was determined by social standing and ability to pay, or by national examinations that reflected social standing and ability to pay. The universities, in the overwhelming majority of cases, had little to do with the selection process. The great exception was and is the private colleges and universities that were established to select and educate their own students.

But the democratic pulse now felt all over the world is changing all this. The drive for literacy has led to a demand for universal primary education. This in turn has forced an expansion of secondary education, bringing a flood of secondary school graduates with valid and legal credentials for admission to the university. Simple expansion of the number of university places has its limits. Slowly and reluctantly universities have had to enter the process of selection so as to establish limits on size and to help match a great variety of skills and ambitions with the universities' special capabilities.

It is at this critical point that universities are prepared neither in agreed social purpose nor in adequate administrative machinery for handling this new assignment. Admission is not a matter of simply saying yes to some and no to others. There are large considerations that must be taken into account that will help shape the future of our societies.

Training Manpower

The university finds that it stands at the confluence of three pervasive forces and social requirements. The first is that of our still expanding industrial technological society, with its need for a steady stream of trained manpower. Modern manpower requirements are translated into the need for highly differentiated talents to be found in the general population. Our industrial and industrializing societies have come to look more and more to the universities to admit, sort out, and train the various talents required to meet

these increasingly sophisticated and specialized needs.

Scientific talent must be identified, encouraged to enter the appropriate disciplines, and educated according to individual abilities. Those with a more abstract bent must be trained in the theoretical end of the spectrum; those with a more practical turn of mind must be trained in the applied sciences. A random method of selection combined with a lack of concern for manpower requirements can cripple any modern industrial system by not providing the right talent with the right training in the right amounts at the right time. In most countries there is some disjunction between social need and university output; where the disjunction is severe, the effect is damaging not only to the growth of the economy but also to the employment of university graduates. Much social unrest and personal anxiety ensues.

The process of selecting, sorting and training this wide variety of talent is a meritocratic response to the needs of a meritocratic society. It is, perhaps, a central characteristic of modern technological and democratic society that it cannot afford to have poorly trained persons in key positions. Being the son of the boss is an insufficient guarantee of competence. And while a diploma from an established university may not be foolproof, it is far more likely to be predictive of success.

It follows that the older, elitist principles of selection based on caste and class are out of phase with the educational requirements of the modern world. So admission procedures have shifted from concern with social origin to concern with verbal and mathematical aptitudes and achievements in science and language. Success in selection could then be measured by the extent to which a round peg would find its appropriate round hole.

But meritocracy had hardly won the day over elitism when it was challenged from the other end of the spectrum. Job needs remained essentially meritocratic, but the supporting admissions system was challenged by a democratic drive of egalitarianism translated into a worldwide pressure for equal access to the university. This view discounts human differences and finds the origins of unequal talent in unequal social conditions, which are in turn partly traceable to elitist and meritocratic considerations for university entrance. Unequal treatment in the past has lead to unequal preparation in the present. The fact that social inequalities are not directly caused by differences in human talent is obscured by the emotional rhetoric that presses for social justice through equal access to and even equal representation in the university.

To this pressure and to these considerations the university must also respond in its admissions policies. Whereas meritocratic considerations require close attention to individual aptitudes and achievements, egalizarian considerations require equally close attention to social justice, representation of minority groups, and financial assistance for the less affluent. While a meritocratic policy emphasizes examinations, an egalitarian policy would do away with them altogether. While in a meritocratic system admission to certain programs would be confined to those with visible or at least demonstrable aptitudes, an egalitarian system would insist that students should go to whatever program they wish, and any deficiencies should be either excused or mitigated by remedial or catch-up work.

Maintaining Standards

As if dealing with and, ideally, resolving these conflicting considerations were not difficult enough, admissions has a third consideration that must be balanced with the first two, namely, the matter of academic standards—of no small concern to the university faculty.

Academic standards are a somewhat imprecise measuring rod but a very significant basis for university decision making. For our purpose here they involve the measurement of student capacity and performance, independent of manpower needs and student aspirations. Inflexible recourse to academic standards could blunt both social need and student expectation. Applied to admissions, it could both change the allocation of talent and thwart the academic aspirations of the young. It has done both. The faculty reply is that to debase standards in favor of nonacademic requirements is to be false to the very idea of the university. At the extreme, it will be asserted that standards are standards, and needs and aspirations will just have to take them into account.

Clearly, admission policies now involve something more than receiving the secondary school graduation certificate and checking it for errors. The handling of admissions is no neutral mechanical process. If admissions reflect only manpower requirements, meritocracy will be indicted as unjust. If admissions reflect only the egalitarian dictates of social justice, society may stagnate from a great mismatch of talent and needed skills. And if admissions ignore the importance of faculty standards, the education acquired may be a fraud. As one country after another moves from elitist to substantially broadened higher education, the admissions procedure becomes in fact one of the long-run determinants of the extent to which an educated citizenry matches the needs and aspirations of a society.

The university becomes a giant scissors. One blade cuts for meritocratic differentiation, while the other cuts for egalitarian similarity. The bolt of the hinge that keeps the blades in place is the bolt of curricular relevance and academic standards.

A Personal Experience

The subject is so important that perhaps a personal footnote is not out of order. When I first came to Cornell University as president in 1963, there were about four black students in each class of about 2,500 entrants. There were some who concluded that black students were not encouraged to enter. This was true. So we encouraged black students to come, and provided as best we could the scholarship help required to make this possible. The admissions policy was, in this case, directly influenced and even determined by considerations of social justice, and social justice seemed to be the precondition of future racial stability. No one should be surprised that there was opposition from those primarily concerned with academic standards and academic freedom. There was also opposition from those who believed that we would be training black students for a world in which there would be no job openings for them.

But what was not widely understood was that a change in admissions policy was not only the key to social reform, but that it would also help to make the special treatment no longer necessary. Once black students were admitted, they graduated with their white classmates (about the same percentage dropped out). Once graduated, black students found a job market that had made the black graduate of a first-rank university a favored applicant for many jobs. Once employed, they encouraged other black students to apply to universities as an important ladder out of the ghetto. In the intricate chain of connection it became clear that jobs (manpower), curriculum (academic standards), and social aspiration (access to higher education) required balanced judgments at various points. In the endless chain involved in social progress, admissions policy was and is one of the key places at which the various considerations could be advanced and balanced.

Once again it is important to point out that social policy can be influenced indirectly were direct institutional statements would be hard to come by. Admissions policy makers can balance a concern for racial justice, job opportunity and academic standards, because the university community accepts the need for balance but permits a committee of its peers to make individual decisions. Social progress not only requires the vigorous push of the reformer, but also depends on the tacit acceptance of reform by those who do not wish to climb the barricades. The university has discovered that its influence is directly proportional to its acceptance of the necessity and wisdom of tacit support and indirect influence.

I hope by now to have shown that while direct institutional intervention is a very limited means of social reform, indirect influences achieved through the social strategies built into normal university activities can and do play their part in social change. We turn now to

a third and even more significant level of influence on social change and social reform—that of professional networks. Here the mode of academic community is dominant, and the mode of institution is present but supportive.

Professional Networks

We have given far too little attention to the professional and his unique role in society. He is highly competent in some field of knowledge such as physics, public administration or microbiology. He may be highly competent in some practice that combines a field of knowledge, a set of skills, and special service—such as medicine, architecture or the law. To say that a man is a professional is to say that he is dedicated to his chosen field and performs at the highest level of capability. Unprofessional conduct is a term of opprobrium. Professionalism is the modern style and spells success.

A second important characteristic of the professional is that he has a dual loyalty—to his institutional employer and to his profession. A physicist may be a government employee, a university professor, a corporation researcher or a colonel in the air force. But irrespective of his institutional home, he is also a physicist and maintains professional relationships that are as important as his institutional connections. Sometimes these relations are of paramount consideration. Institutions are, in these circumstances, used by a professional network to advance its own programs, standards of performance, and even its idea of the national interest. This is not necessarily a bad thing, but it can and does sometimes complicate life for the institutional manager.

A real-life illustration will help make my point. One day at Cornell I was paid a visit by a professor of nuclear physics. The professor informed me, with obvious delight, that Cornell had been selected as the site for the largest campus-based synchrotron in the United States. All capital and operating expenses were to be paid by the National Science Foundation. I replied that the honor was indeed great, but might Linquire who had made this selection? He replied that a committee made up entirely of nuclear physicists had drawn up a ten-year plan for the development of the field, had sold it to the executive office of the President and the chairman of the relevant committees of the Congress. Anticipating a question hovering in the corner of my eyes, he explained that, of course, he had not wished to take up my time until the matter was all set. And it was all set, because I came to agree that this great machine could be absorbed by the university without irreparable damage, and even to some advantage. It was extremely fortunate that I came to this positive view, because I am by no means clear that I could have denied its entrance without a fatal palace revolution.

An additional characteristic of the professional is that national boundaries are as easy to surmount as are the jurisdictions of domestic agencies—public or private. It is perhaps no coincidence that the earliest and most continuous American dialogue with the Soviet Union was conceived and manned by scientists and engineers who reached out to their professional counterparts as partners in a discussion of political and social issues. Science involves a scale of consideration—be it for a trillion-volt synchrotron or for a mission into space—that requires the active support of more than one government.

These professional links form a network of influence in which the professional on the university campus has his distinctive role. He is the original link in the chain, the source of professional training, the man largely free from political or monetary concerns, the bell cow in the professional flock. To make the connection between the professional and the university as an instrument for reform more evident, permit me to include a word or two about the influence of colleges of agriculture in land-grant universities in the United States.

Land-Grant Colleges

A series of these universities was established in the United States over 100 years ago to provide education and training relevant to a growing industrial society. One feature of this program was the application of science to the production and distribution of food. To this end colleges of agriculture and of engineering developed in almost every state of the union; these colleges housed the new professionals ready to forge the links between the laboratory and the farm. A chain of professional connection was gradually established, starting with professors of biology and running to professors of animal husbandry, then to extension professors of applied agriculture, then to county agents trained in the universities, then to local farm groups, and finally to the farmer himself. Thus the basic research in the university laboratory could be translated by easy and established stages down an uninterrupted and connected chain of competence. Conversely, the farmers' problems could work their way up the chain to the level that could produce adequate answers. Thus research was visibly relevant and, therefore, farm productivity became a smashing success.

The land-grant colleges are the important supportive link in the chain that has produced the miracle of agricultural productivity in the United States. In so doing they have freed millions of farm workers formerly needed for the production of food to go into various parts of the growing industrial complex. At the same time, they have made possible the food reserves that in times of trouble elsewhere have forestalled famine and even revolution. And, of course, they

have incidentally helped to populate our cities and depopulate our rural areas. Finally, they have made agriculture dependent on an increasingly sophisticated technology, which has in turn further strengthened the chain of connection and interdependence in society as a whole.

The important point is that professional networks of men trained largely at the university, but now to be found throughout all institutions, public and private, academic and business, with their hands in the soil or around the test tube, have provided dynamic links between theory and practice, campus and farm, that significantly helped transform our societies from rural-agricultural to urbanindustrial. It may seem strange that it was an agricultural program that gave such a powerful assist to the modern industrial state. But that is the way it was, and is.

The University as a Free Community

The fourth influence of the university stems from its style and nature as a free and semi-autonomous community rather than as a corporate institution. It is the one place—perhaps the only place in society—where ideas, however inspired or foolish, can be expressed freely and exposed to criticism. Consequently, it is a haven for the dissenting, the unpopular, the critical voice. If reform springs from the seed of discontent with what is, accompanied by a vision of what could be—then surely the university influence for reform is great, for it maintains a community in which a diversity of such visions can openly exist. In this sense, the university is not just the "home of lost causes" but the home of all causes—contradictory though they may be.

The university is also an idealized community. Its activity is removed from the pressures that come from living with the consequences of statements and actions. Thus, there is a built-in comparison between the real and ideal world which places the university community in a state of chronic dissatisfaction with the world around it. As a student newspaper editorial put it, "only the young can be truly moral, because their values have not been contaminated by experience."

The dissatisfaction can flare up into revolt when the real world departs too far from the ideal, and particularly when other critical voices are not to be heard. Thus, in authoritarian societies students have frequently been the de facto opposition party. In these circumstances, student political activity, with the university campus as a base, has not been without influence. Sometimes the campus is the center of the action—demonstrations against unpopular visitors are cases in point. At other times, the university administration is the target, or some teacher, or some course of study. But, generally

speaking, university confrontation is used as a means of giving visibility either to some substantial complaint about the status quo or to some constructive program or project aimed at righting wrongs.

Educated Man — Most Potent Influence

Finally, we come to the most pervasive influence of the university as an agent for social reform—the development of the educated man. In the long run, the educated man is the yeast in our social dough.

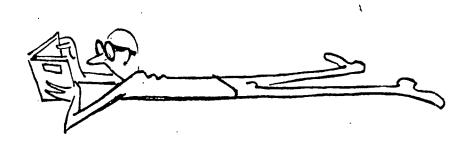
The educated man knows that injustice can be reduced, because through a reading of history he knows injustice had been both experienced and dealt with in other civilizations. Injustice and justice, he has come to believe, are both man-made.

He has learned the value of objectivity, which protects him from confusing emotional commitment with the truth. But he also knows, in the great phrase of Northrup Frye, that "concern prevents detachment from degenerating into indifference."

He knows that truth is never the monopoly of any person, any group, any country, or any civilization. He will be ranged against those who make such claims. He is anti-authoritarian.

He has watched the careful way in which his teachers separated what is from what ought to be. He has appreciated all the more those who make the distinction in order to proclaim allegiances to the great values and great aspirations that have moved all men.

We do not mean that the educated man is necessarily good; educated men and women have frequently put their education to evil uses. Nor do we mean that the educated man is necessarily omniscient. He can be wrong. The educated man may not have the answers, but he does have the style that is more likely to produce the answers.



MORAL AUTHORITY AND THE INTELLECTUAL

By Alexander M. Bickel



In the late 1960s and early 1970s American universities were accused by the student left of hiding from the social realities of a potentially revolutionary time. A scholar who has been called "the keenest public philosopher of our time" describes with a combination of irony and indignation how American academics, reacting to this accusation, foolishly succumbed to what were really irrational slogans, and thus jeopardized their moral authority. Professor Bickel cites the English political philosopher Edmund Burke on the limits of justice in a necessarily imperfect world.

Alexander M. Bickel, who was professor of law at Yale University at the time of his death in 1974, was one of the most respected and influential authorities on American constitutional law. But, no reclusive scholar, he also

engaged in intellectual jousting on fundamental public issues of the day. He wrote several books, among them The Least Dangerous Branch: The Supreme Court and the Idea of Progress. This article is abridged from his last book, The Morality of Consent, published by the Yale University Press.

Ithough the furor of American universities in the late 1960s has been succeeded in the mid 1970s by peace, the conditions of emergency and crisis still prevail for the university and for the intellectual, even if in ways less obvious than before. It behooves us as academics, therefore, to reexamine the very foundations of our conduct. For they have been questioned, radically and violently. We have been charged with moral neutrality, with gradualism, with betrayal of moral imperatives.

Now our universities have, by and large with good cause but not without difficulty, been persuaded to the belief that knowledge and insight, like art, are the products of independent minds following each its own bent, and are not often to be attained otherwise. In universities, professionals of many disciplines can follow lines of inquiry determined by themselves, individually and collegially, and dictated by no one else, on grounds either ideological or practical. While not all universities or colleges pretend to be such places, and

other institutions like research institutes can be, only in a university can inquiry and teaching constitute one creative whole, so that the knowledge and insight of the scholar and the methods by which he gained them are shared with the student; so that the student may be the scholar's company, nourishing him, giving as well as taking, in a word, collaborating. To this end, teachers must be free to teach, as free in their teaching as in their scholarship; and the enterprise—with its twin freedoms of inquiry and of teaching—must be judged by professional criteria and none other. No one will claim that the ideal university exists, or that all members of all faculties are intent on independent intellectual labors, but we approach no closer to the ideal by admitting nonprofessional and nonintellectual criteria.

The young, like society at large, have their own perceptions of their needs, and society has an instrument at its disposal for bringing these needs home; it is the market, inside the university and out, and in the aggregate, over time, it is quite effective. Students vote with their feet, choosing the university they prefer and accepting or rejecting parts of the elective curriculum; their parents vote with their pocketbooks. The curriculum of every university is witness to that. The market serves as a limit on academic freedom.

The Practical Servart of Society?

While, like many other institutions, universities are sluggish in times of rapid change, the university as the practical servant of the society can all too readily swallow up the university as the haven of independent inquiry. It would do so, to the ultimate detriment of the society itself, if stucents were given a decisive voice in setting the curriculum, or otherwise in directing the university's intellectual life, just as if alumni, or government, or churches, or labor unions, or business, or professional associations were given such a voice. Some universities may well be miseducating students, or educating them insufficiently, but nothing in the experience of the recent years with students acting en masse indicates that students know how to do things better. The mood of many students is anti-intellectual, antiprofessional. They do not want to know, they would rather feel and be. Is it seriously contended that they should be allowed to feel and be and to not know, in a university which then certifies them as knowing enough to commit surgery on a person, architecture on a building, or a law suit on a client? However embarrassingly unfashionable it may be to insist on power and privilege, inroads on the autonomy of faculties are inroads on academic freedom; the abandonment of any faculty control over appointments, curriculum, and academic standards is the abandonment of the ends of the university.

But the ends of the university, we academics have been told, and the methods and structures designed to attain them are political and, we have been told, our ends and our methods are wrong politically, or at least unacceptable or undesirable. A different set of political objectives and means must-by means themselves political—be substituted for those we have avowed and practiced. It may be admitted that the university is, by extension, politically involved. The university is committed to freedom of inquiry, to the method of reason, however fallible. It is agnostic, and it is neutral to a degree, and from certain vantage points, reason, agnosticism, and neutrality can be seen as political. To the radical—of the Left or the Right-intent on the attainment of immediate social ends that he conceives as moral imperatives, such neutrality appears as a commitment to the other side. Neutrality and agnosticism are, indeed, likely in practice to result in an attitude of gradualism and a rejection of absolute activism. Intellectuals are committed, in short, to thought without action, and to thought which may oppose action, and it may as well be conceded that a neutrality proceeding from such a commitment does have practical consequences. Not for nothing did the Nazi say, "When I hear the word culture, I reach for my revolver." A brilliant young radical writer in the United States a few years ago echoed the Maoist view, saying "Morality"-and he could as well have added reason, too-"is what comes out of the barrel of a gun."

Universities and professional and scholarly organizations are also institutions of the existing order, but special institutions with special functions, including the questioning of their own and others' premises and those of the society itself, and the entertaining of ideas subversive of the society. Yet, as institutions of the existing order and supported by it, they have an implicit bias toward its basic presuppositions, an implicit allegiance to the minimal principles and structures that tend toward its preservation. This also is a political bias. Judges do not take an oath to humanity at large, or swear to follow their own consciences; they take an oath to support the law, and in the United States, the Constitution, with its own political meaning. Universities are less explicitly committed, and private universities not at all.

Still, all institutions that require substantial support from the society—even the universities—must realistically be viewed as resting on an assumption of generalized allegiance to that society. Even a university's unlimited freedom of inquiry and freedom of radical opinion assure institutional acceptance of the legitimacy of the regime. Political involvement in these extended senses of the term is as defensible as it is ineluctable, and it is fully consistent with freedom of inquiry.

Active Commitment

But, more recently, a measure of ideological, political commitment, an active engagement with immediate social and economic problems, has been asked of universities. What would the consequence of such passionate and practical commitment be to the freedom of inquiry that is the heart of the university? A legislator or judge is expected to take individual positions, his votes are recorded and publicized, and he is nowhere identified automatically with the positions of his institution. But the population of a university -student, faculty, and other-is too large to permit such separate identity. It is difficult to see how an economist who thinks minimum wage laws foolish and bad can maintain his identity in an institution that favors minimum wage laws, or how a non-Marxist can maintain his identity in a Marxist institution. If universities as institutions are to be identified politically, faculty and students would sort themselves out on political grounds, and the institutions would then become monolithic. An institution politically involved in this sense could hardly avoid committing its largely human resources to that end; it would try to induce and finally to compel its members to devote themselves to the attainment of the end to which the institution is committed. That is the death not merely of diversity and exchange of ideas, but of free inquiry altogether. In the last analysis, what else can be intended by demands for political involvement and, even if not intended, how can it be avoided? Loss of intellectual quality, and ultimately of content, would follow.

American universities have been subjected, and many have in varying measures succumbed, to political pressures for the dilution and even the abandonment of intellectual standards in the recruitment of faculty and students from certain minority groups, including women, who are assuredly no minority in the population at large. The problem is complex. The groups in question have certainly been disadvantaged in the past, and an effort to recruit them and to open opportunities to them is overdue. Moreover, our admissions tests are sometimes tests not of capacity only, not even sure indicators of performance in the university environment, but, in the words of a Chinese euphemism, "investigations of cultural knowledge," classbound and framed in terms of the culture of a dominant group, not the culture in a large sense. To the extent that this is true, we test not merely for capacity but for a background which may not be relevant to capacity, and candidates may fail not for lack of relevant capacity but for lack of irrelevant background. Culture, in a larger sense, is what universities aim to transmit and what students must work and achieve in, but parochial standards within it should be transcended. Instead, we have often yielded to pressures simply to relax standards. This political concession is wrong.

Quotas: A Two-Edged Sword

The dilution of standards in the university as a whole, administrators and faculties have told themselves, is not serious if the number of "substandard" individuals recruited as faculty and students is kept low in proportion to total numbers. The solution, in other words, is the quota, the numerus clausus, by whatever name it may be called or by whatever euphemism disguised. But the cost to the university and to the society is serious. There is a cost in loss of efficiency and productivity—in the university immediately and in business and the professions later on—from which no one benefits. And there is a cost in injustice. A quota is a two-edged device: for every one it includes it cuts someone else out, and we are not wise enough to administer the exclusions justly, even assuming the justice and wisdom of our inclusions, which I do not.

So in the case of affirmative action on equal opportunity. If the Constitution prohibits exclusion of blacks and other minorities on racial grounds, it cannot permit the exclusion of whites on similar grounds; for it must be the exclusion on racial grounds that offends the Constitution, and not the particular skin color of the person excluded.

The lesson of the great decisions of the Supreme Court and the lesson of contemporary history have been the same for at least a generation: discrimination on the basis of race is illegal, immoral, unconstitutional, inherently wrong, and destructive of democratic society. Now this is to be unlearned, and we are told that this is not a matter of fundamental principle but only a matter of whose ox is gored. Those for whom racial equality is demanded are to be more equal than others. Having found support in the Constitution for equality, they now claim support for inequality under the same Constitution.

Yet a racial quota derogates the human dignity and individuality of all to whom it is applied; it is invidious in principle as well as in practice. Moreover, it can as easily be turned against those it purports to help. The history of the racial quota is a history of subjugation, not beneficence. Its evil lies not in its name but in its effect; a quota is a divider of society, a creator of castes, and it is all the worse for its racial base, especially in a society desperately striving for an equality that will make race irrelevant.

The cost in efficiency, as well as the injustice, ought to be deemed unacceptable. In a society in which men expect to succeed by hard work and to better themselves by making themselves better, a society, moreover, in which prejudice for some groups has only recently been overcome, so that the expectation has begun to be fully met, it is no trivial moral wrong to proceed systematically to defeat it.

In many employments artificial qualifications have been erected,

or wrong ones, unduly bound to middle-class culture and insufficiently related to true efficiency, and these can properly be reexamined. But to reject an applicant to a university faculty or for a position in business or for a job as an electrician or in the civil service who has met established, realistic, and unchanged qualifications in favor of a less qualified candidate is morally wrong and in the aggregate disastrous. Where the casting of a wider recruitment net produces no results, our energies ought to go into training and tutoring the disadvantaged and the excluded, not into compromising and ruining, morally and practically, the society that has wronged them in the past, as it earlier wronged others, and which now recognizes their just complaint.

A Guard Against Injustice

Standards and their impersonal application—free of group as well as of personal prejudices—guard us against our inevitable tendency to injustice, I would say, our human appetite for injustice. Man is born to injustice in another sense, no doubt, divine injustice, the injustice of unequally distributed endowments. I think the teaching of our tradition is that the only way to avoid adding the crueler injustice of man himself to that of the cosmos is to accept the latter in its irreducible form.

There is an additional cost of politicizing the university by pressing on it commitments and missions. I approach this point with caution, because the university is not a church, its members are no priesthood, they are not even any sort of a political elite with judgment on affairs that is particularly acute and worth heeding. On the whole, I think the contrary is true. And yet, though no priests or philosopher kings, scholars often bring a valuable detachment to affairs. All too little information and opinion enter the universe of political discourse with the credit that attaches to disinterestedness. Much of what there is comes from academic and professional persons, whose credentials are certified by universities or other professional and scholarly organizations, and who are known to be certified in accordance with neutral standards, not political objectives. Persons so certified then speak with a certain moral authority; they inject into the political process something the process cannot easily generate itself-dispassionate, informed, disinterested judgment, which looks beyond the interests and objectives immediately engaged in the debate. If the "accrediting" institutions themselves become politically engaged, their accreditation loses its value, and society will be the poorer. Disinterested judgment will have lost much of its moral authority.

It is as if judges were assumed to decide on the basis of personal predilection, class interest, or political affiliation. No one of course

can step altogether out of himself, but there is a category of men, including judges, to whom we assign the role of making the effort. Some maintain that this is a sham, that no one really plays such a role, and if that were so it would be as well to be candid about it. For those who believe that it is a sham, political involvement on the part of universities and like organizations is a matter of candor. But in truth, the role can be played and is a valuable one, and if that is so, then for universities political involvement constitutes a wanton abandonment of it. Such consequences, to be sure, come only gradually. If a university's board of trustees or a faculty votes by a preponderant majority to commit itself to one or another political cause, nothing fundamental probably occurs. The effect is cumulative. The consequences follow over time from many actions in the aggregate.

Issues of Moral Importance

Hence it has been urged that a faculty or a board of trustees or the annual meeting of a professional association can permit itself to vote on a critical issue of fundamental moral importance, an issue of the sort that does not arise every other day-for example, the Vietnam war. Issues of seemingly fundamental moral importance do not arise every other day for everyone; still, they arise every day for someone. And each time it will have to be a majority which decides the jurisdictional issue, as well as the substantive one, which decides whether an issue is of such fundamental moral importance as to call for taking a position, and what that position should be. Within the confines of any culture, one may concede, some rare ultimate issues would almost universally be viewed as of overriding moral significance. Even then, all the institution can do that individuals cannot is in some sense to put its function on the line, to close its doors or something of the sort, or else over the longer run, to commit its resources. But is enough gained by that? If exceptions are conceded on certain issues of the greatest magnitude, the danger of sliding into a continuous course of political involvement is all too great.

The Scranton Commission, appointed by President Richard M. Nixon in 1970 to study the causes of student unrest, enjoined universities to "remain politically neutral, except in those rare cases in which their own integrity, educational purpose or preservation are at stake." Perhaps it brings us back to the notion that universities are after all committed to a set of basic values and processes, and when those values and processes are in question they should act in their defense. The commitment among other things is to political neutrality. The Scranton Commission was saying that political involvement is justified only when necessary to avoid it. And this is the sort of political involvement that the German universities in the 1930s failed to undertake. They did not resist being pushed into

political involvement. That was their sin. We in the universities have been urged to sin in quite the opposite direction.

The Coming Apocalypse

It all started with the Vietnam war, which represented a malfunction of the system; the continuation of an insufferable war led quite naturally and reasonably to talk of systemic crisis. Among academics and other intellectuals, it became not merely fashionable, but required, to speak apocalyptically of such systemic crisis. The war had to stop, the march into Cambodia was a gruesome error, the cities were a mess, our rivers and our air smelled awful, and the blacks would not and ought not to stand for being forgotten again. The talk of apocalypse became relatively muted, only to grow in volume with Watergate. Watergate, it was said, proved irrefutably that the system was a hoax and must be torn down.

But there is another crisis that could incapacitate us from dealing with these problems. It is the crisis of the abandonment of reason, of standards, of measure, the loss of balance and judgment. Among its symptoms were the incivility and even violence of rhetoric and action that academics and other intellectuals domesticated into their universe of discourse, and the interdiction of objective discussion that they increasingly tolerated, an incivility and violence and interdiction happily on the decline on the campus but unfortunately not altogether abandoned.

It is not reasonable to extend a systemic indictment to the entire structure of government, to the electoral process itself, to the administration of just .ce, to every debatable action that a new national administration thinks it has a mandate to take, and to every type of institution. Everything can be improved, even radically improved, and change is the law of life. But not everything can be improved instantly, and not all change is good. And destructive nihilism is evil no matter how motivated. These things it has been unfashionable for intellectuals and their audiences to say and hear. At Yale University, in April 1970, the university was full of painted and stenciled slogans and threats called dissent—but in truth vandalism, a kind of aggression almost physical, in content most often a series of curses without pretense of an effort to persuade. No principle of a free society requires institutions public or private to allow such verbal violence within their precincts, and to permit reasoned analysis to be driven out while passionate assertion is assumed to be presumptively right, and dispassionate/judgment presumptively immoral. Yet we academics have observed it and listened to it respectfully, and thus have legitimated it. Because the university, the government, and the legal order—we heard it said and assented to—are thoroughly unworthy, they may not use force to protect themselves against violence, but force may justly be used against them.

The young were right about the war in Indochina. The young are right too about a great deal of racism and about the debasement of values by commercialism. But many are wrong about repression. The society is free and open, if flawed and gravely troubled. Watergate revealed corruption and conspiracy; it also revealed that the country's institutions were strong enough to hold the corrupt to account. Our domestic problems can be solved or alleviated only through the democratic political process, which is slow and prone to error.

Wrong About Repression

But revolution would produce only something less responsive to claims of social justice and infinitely more coercive and oppressive. Of course, the objective situation in the United States, as Marxists would say, is such that violent repression is more likely than violent revolution. A revolutionary frame of mind is dangerous not only because it may evoke an effective counter-revolution; it is dangerous also, the more dangerous, because guilt-ridden and otherwise disoriented liberals and intellectuals are intimidated by it into damaging the institutions that hold out the only realistic hope for the redress of many legitimate grievances, and that alone stand in the way of counter-revolution. It is probably statable in the form of an equation that so many rampages, so many bricks and bottles thrown, and even so many epithets hurled will eventually produce so many innocent victims; and also that so much talk of the rottenness of men and institutions, solemnly countenanced by so many apparently rational people, will produce so much incendiary counterrhetoric and counter-rampaging. A price is inevitably paid for destroying the order of society. If the streets belong to the people, they are going to belong to all the people, not just young radicals. Selfrighteousness and zealotry are human attributes, not political positions. If they are tolerated on the Left, they will gain ascendancy on the Right. "Kings," wrote Edmund Burke, "will be tyrants from policy, when subjects are rebels from principle."

Liberals who want no revolution are forever trying to appease the revolutionaries in order to entice them back up on the raft. If the Committee for Public Justice, organized by numerous distinguished lawyers and academics in 1970, was right in its charge that the Bill of Rights is "being killed," we need, of course, to listen more seriously and with less shock to proposals for scrapping the whole system. We need to be open to radical programs of protest, even if they do portend violence. For violence, applied intelligently and as humanely as possible, does not necessarily discredit a quest for human rights when these are trampled underfoot, and are about to

be snuffed out by concerted repression. Extremism in the defense of liberty is no vice, except that one has doubts about the kind of liberty the maker of that phrase was defending. If, on the other hand, it is not true, but simply another instance of rhetorical inflation, we need to ask whether announcing the imminent death of our rights may not help to bring it about.

The Loss of Moral Authority

The moral authority of liberalism is lost when the fundamental principles and attitudes of liberalism are compromised or abandoned, for these principles are the essence of the American political tradition. They touch Lincoln's "mystic chords of memory." They are the foundation of the liberal ascendancy in our politics. The danger is not that the moral authority of liberalism will be destroyed, thus bringing on rule by the Right, but that the moral authority of liberalism will thus bring on the revolution of the Left, if not its rule. This danger is not a trifling one. The country, the revolutionary Left has said, is brutal, inhuman, racist, selfdestructive. The society is debased, hopeless, beyond repair. If that is true, only the pacifists among masses of people who share allegiance to liberal principles would long continue to resist the revolutionary idea. And most of us who waged World War II and called for the use of troops to secure civil rights in the South are not pacifists, and neither are our children. It is therefore no light thing for spokesmen of the liberal tradition to infest political discourse with a pestilence of condemnations of this imperfect but not quite debased society.

Ills there are in our society, as the revolutionaries have reminded us. And there is no point in a recital of achievements. All that can be proved is that we are entitled to high hopes. Yet revolutions are born of hope, not of despair, even though they need the rhetoric of despair to justify the dirty work by which they are made. The question about a revolution, therefore, is not what has it despaired of, but what are its hopes? Our recent revolutionists have offered us hatred. They despise and dehumanize the persons, and they condemn the concerns and the aspirations, of the vast majority of their countrymen.

Tyrannic Means

In the end, perhaps the revolutionaries will unmask themselves. The faith embodied in the First Amendment is not only that in a free society few will want to make a revolution, but that where the revolutionary idea may be freely ventilated, it will defeat itself. The answers are obvious: those of us who insist on striving and on swilling beer don't really know what we want, and the revolution

would enable us freely to want what we should. And we would not be dancing in the streets all the time, but fulfilling ourselves at play and at work. Those of us who play too much would be told gently, persuasively, but in the end firmly by our new leaders (positioned not above us, but side-by-side with us) that for our own and the common good we ought to work more and play less. And we would do it gladly, for the society would be ours. When we work, we would do the work that fulfills us, not some task to which we have been arbitrarily assigned, and if we fall into some individual error about what work really does fulfill us, we would be shown our mistake, we will see it, and proceed to do what we ought to do. It all rings true. Such a system can surely be built. It is only that there is a name for the means that must be employed to create that system and maintain it. That name is tyranny.

When bushels of desires and objectives are conceived as moral, imperatives, it is natural to seek their achievement by any means. There is no need to fear that the same means will be open to others, because the objectives of those others will be understood to be bad and unacceptable whatever the means used to attain them. One has to believe rather that no amount of opinion can be eternally certain of the moral rightness of its preferences, and that whoever is in power in government is entitled to give effect to his preferences. Then, but only then, is it crucial that everyone adhere to certain procedures, and that some means be forbidden to all. The fabric is held together by agreement on means, which are equally available or foreclosed to all, and by allegiance to a limited number of broad first principles concerning the ends of government. These first principles are what the law of the Constitution is about. They change over time and develop, and become entrenched as they gather common assent. Beyond them lies policy, and there lie our differences.

If most of the things that politics is about are not seen as existing well this side of moral imperatives, in a middle distance, if they are not seen as subject on both sides of a division of opinion to fallible human choice, then the only thing left to a society is to succumb to or be seized by a dictatorship of the self-righteous. I do not wish to overstate the case, but this seems to be inevitably the conclusion to which disenchanted and embittered simplifiers and moralizers must come. But if we do resist the seductive temptations of moral imperatives, and fix our eye on that middle distance where values are provisionally held, are tested, and evolve within the legal order—derived from the morality of process, which is the morality of consent—our moral authority will carry more weight. This can lead us then to an imperfect justice, for as Burke cautioned, there is no other kind.

THE RESTLESS CONTINENTS

By Walter Sullivan



For centuries man has marveled at the wonders of nature: fossil trees in Antarctica, the ring of volcanoes around the Pacific Ocean and the striking fit between the continents of South America and Africa. Recent discoveries in such diverse fields as earthquake monitoring, deepsea drilling and nuclear explosion detection have finally provided the keys to unlock one of the earth's great secrets and link these seemingly unrelated phenomena.

Here a noted science writer explores the processes by which continents drift slowly across the face of the globe, great mountain ranges are thrust up and huge seas are born and die.

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an one take seriously the proposition that Boston was once part of Africa, separated from western Massachusetts by an ocean? Or that New York is farther from London than it was a year ago? Or that Los Angeles will some day nestle alongside San Francisco?

Until recently, such propositions would have seemed preposterous, but today a revolutionary new understanding of the planet on which we live has made them plausible. With this understanding, we can also explain a number of far older mysteries about the earth: scientists have long been puzzled by clear-cut evidence of radical climate changes in various parts of the world. For instance, the islands of Spitzbergen are a rich source of coal, which was formed long ago in a subtropical environment and is being heavily mined by Norway and the Soviet Union, yet Spitzbergen is situated in the Arctic Ocean. In Greenland there are remains of warm-water coral reefs, and in the mountains of Antarctica closest to the South Pole there are fossil trees of considerable girth, showing that this ice-covered continent was at one time forested. On the other hand, one finds the scars left by past ice ages in equatorial Africa.

Slow changes in the earth's spin axis might explain such

phenomena, and some earth scientists still believe they played a role. But such changes cannot explain the peculiar distribution of plants and animals over the globe. For example, although marsupials, the ancestors of today's kangaroo and opossum, apparently evolved in the Americas, they are now most populous and diverse in Australia; yet, there is no fossil evidence of their migration via Asia. Lemurs, the most primitive of the primates, are found in Madagascar and nearby East Africa as well as on the opposite side of the Indian Ocean in South Asia, but not in the Asian and African land mass that lies between. The hippopotamus, moreover, wallows in the waters of Madagascar as well as along the coast of Africa 250 miles across the sea. Is it conceivable that those lumbering beasts swam all that way? Some scientists postulated that a continent, which they called Lemuria, once filled the Indian Ocean to provide the necessary land link.

The Theory of Continental Drift

It was a German explorer named Alfred Wegener who in 1912 first presumed to explain these phenomena with the notion that the continents are in motion with respect to one another. While various nineteenth-century scientists had speculated on past movements of continents—particularly a separation of Africa and South America, whose coastlines fit together so strikingly—Wegener was the first to present a comprehensive argument for continental drift. Wegener found that he could fit all the continents together, like the pieces of a jigsaw puzzle, into one supercontinent he called Pangaea. Pangaea, he said, began to break up during the Age of the Dinosaurs some 150 million years ago. Antarctica, Australia, India and Africa broke away during the initial separations. Subsequently, Africa and South America split apart "like pieces of a cracked ice floe," followed finally by the opening of the North Atlantic.

When first introduced, Wegener's theory was a scientific heresy. But a mass of new evidence indicates the continents are moving—although with an even grander pattern of motion than Wegener envisioned. As revised and elaborated, the theory of continental drift is of major importance to our future.

The Earth as an Apple

The theory today sees the earth's rigid surface as broken into six or eight huge plates, or irregular shapes, with smaller ones filling gaps between them. Some, like the Pacific plate, are almost entirely formed of ocean floor. Some are made in part of ocean floor and in part of continental land mass; for example, North America and the western half of the North Atlantic constitute a single plate stretching from Iceland to San Francisco.

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The earth's interior can be likened to that of an apple. Inside is the core, probably made of nickel and iron, with a liquid outer part but a center that has been compressed into a solid by the weight of material pressing around it. The crust of the earth is hardly thicker, relatively speaking, than the skin of an apple. It is divided into two quite distinct "provinces," as Wegener recognized when he first set forth his theory: the deep-sea floors and the continental blocks. The deep-sea floors are typically two or three miles below sea level. The continental blocks are either higher than the sea or no more than a few hundred feet below sea level.

Between the crust and the core lies the mantle, which, like the pulp of the apple, is the greatest part. Most of the mantle is relatively rigid and dense. However, thanks to new, sophisticated methods of earthquake analysis, it has been demonstrated that the top 100 miles or so of the mantle are relatively soft—a lubricating layer that makes possible the plate movements, and may itself be in motion, carrying the plates on its back.

One of the primary movements of the plates is a spreading apart of the ocean floor along ridges such as the one running down the north-south centerline of the Atlantic—it is this that increases the distance to London every year. As the plates on either side of the ridge are carried away from each other, hot, semimolten rock rises beneath them to fill the cracks. New sea floor is being manufactured along a global network of such ridges, which resemble the cracks in a hard-boiled egg and constitute the "seams" of the plates (other branches extend into the Indian Ocean and virtually all other ocean areas).

Another form of motion occurs where plates are sliding alongside one another instead of being pulled apart. The Pacific plate, for example, is slipping northwest relative to the North American plate. The western rim of the North American plate has been torn loose from the continent by the Pacific plate and is being carried northward with it, accounting for earthquakes along California's San Andreas Fault, which marks the boundary between the plates. It is this motion, amounting to little more than an inch a year, that should bring Los Angeles abreast of the present location of San Francisco some 20 million years hence.

Into the Earth's Interior

For every inch that is added to the width of the Atlantic, moving Eurasia and America apart on the Atlantic side of the globe, there must be a comparable shrinkage of the Pacific as those two giant land masses move closer on the Pacific side. If new sea floor is added by volcanic activity along the centerline of the Atlantic, where is it subtracted from the Pacific? It is now clear that sea floor is being

forced—or dragged—down into the earth's interior along the volcanic arcs that ring the ocean from Alaska and the Aleutians to Japan, the Marianas, the Philippines and the islands of the southwest Pacific.

Similar activity is occurring along the coasts of Chile and Peru, compensating for shrinkage of the Pacific as South America is pushed westward. If the oceans were dry, the trenches that parallel the island arcs and the Peru-Chile coastline would be among the most prominent features of the earth's surface.

The pattern of earthquake activity beneath the island arcs and the volcanic coastlines is particularly striking. The quakes occur in a sharply defined zone, which is shallowest beneath the trench floor, then slopes down beneath the line of islands—or beneath the coast, as in Chile and Peru. The slope may extend to a depth of 400 miles, or one-tenth the distance to the center of the earth. There seems little doubt that what is happening is that the sea floor is descending into the earth's deep interior; the quakes are caused either by the descending plate grinding against the plate above it or some other process related to the descent. No earthquakes occur below a few hundred miles, presumably because by then the sea-floor material has become too hot and soft to produce quakes.

The volcanoes that rise over this descending plate originate at a depth of 60 to 100 miles. Apparently, part of the sea-floor material begins to melt at that depth, pushing its way up as lava.

Continental Collisions

If continents drift around embedded in plates along with vast chunks of sea floor, what happens when two of them collide? While sea-floor rock, which is very dense and heavy, can be forced to descend into the depths of the earth, continental rocks are too light to sink. The result of a continent-continent collision is therefore an awesome distortion of the landscape.

Epic events of this kind evidently gave birth to the Alps, the Himalayas, the Urals and the Appalachian Mountains. The Alps have been thrust up by the movements of Africa against the southern flank of Europe. The Himalayas arose when India crashed into the southern flank of Asia. The Urals were produced when an ocean that once separated Europe and Asia was snuffed out, bringing Siberia into collision with Russia. And the Appalachians were formed when a predecessor of the Atlantic Ocean shrank, just as the Pacific is shrinking today, until its opposing coastlines crushed together.

After that collision, when the original supercontinent Pangaea split up into continents, which drifted to opposite sides of the Atlantic, part of Africa and Europe stuck to North America, and part of

America remained welded to Europe. It is for this reason that, as fossil evidence shows, part of the rim of North America, including eastern Massachusetts, once belonged to Africa. How long have such marriages and divorces of continents been going on? We have good evidence only for the past few hundred million years, about one-tenth of the time since the creation of the earth's surface. Nor do we know very much as yet about the process responsible for the motions, although it is generally believed to be some form of convection—the pattern of circulation that occurs when a fluid or gas is heated, as, for instance, when water is boiled on the stove: the water rises over the flame, cools and spreads at the surface, then slips down the sides of the pot to flow in again over the heat source.

Yesterday's Heresy

Whatever the process, the scientific heresy of 1912 has become the orthodoxy of today.

From fossils in ancient rocks, we know that during the coalforming period some 300 million years ago, there was a uniform vegetation in lands now scattered from the South Pole to India. One hypothesis was that these lands—Africa, Antarctica, Australia, India and South America—were once linked by a continent that is now submerged called Gondwanaland, named for the region of India inhabited by an aboriginal tribe, the Gonds, where this fossilbearing formation is now widely exposed. Could a continent have sunk beneath the sea like the legendary Atlantis?

It was evident to Wegener and his contemporaries that large continental areas do sink when covered by a load of ice, and rise again when the ice is removed. Such movements are slow. Parts of Finland, which were relieved from the load of the last ice age some 10,000 years ago, for instance, are still rising three feet a century. Such rising and falling implies that the interior of the earth is plastic enough to flow out from under a continent and then flow back when the load is removed.

It was such plasticity that, to Wegener, made continental drift seem plausible. To him, it appeared much more likely that continents which once had a common flora and fauna had drifted apart than that a huge land mass, like the hypothetical Gondwanaland, should unaccountably have sunk.

A Dynamic Planet

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Wegener's original idea was that the continents were plowing through the ocean floors like ships through thin ice. He offered evidence for radical changes in the past locations of the continents that was impressive, but most geologists found it hard to believe the plowing metaphor.

By 1960, enough new seismological evidence had been gathered for Harry Hess, head of the geology department at Princeton University, to pull seemingly unrelated discoveries regarding oceanic quakes and heat flow in the ocean floor into a comprehensive picture of a dynamic planet. In what he described as "an essay in geopoetry," Hess proposed that hot, semimolten rock is rising beneath the oceanic ridges and spreading away from them in great convection currents that are tearing the ocean floors apart at their seams. Along these seams—the ridges—molten rock rises to fill the cracks as the plates of sea floor are carried away from each other. If the ridges are where new sea floor is being manufactured, Hess said, the trenches are where the sea floor descends into the depths of the earth's interior. When the apron of descending sea floor reaches a depth of 60 to 100 miles, part of the material melts under heat and pressure and then forces its way upward again as lava to create volcanoes.

Spreading Sea-Floor

A U.S. Navy scientist, Robert S. Dietz, quickly seized on Hess' idea and called it the "sea-floor spreading" hypothesis. Dietz began to explore how it could account for the past history of the continents, but by and large the theory had few takers. Resistance to the "heresy" began to weaken only with new findings from some seemingly unrelated research into the earth's magnetism.

As early as the start of this century, it was known that particles of iron within potting clay, lava and other materials, when heated sufficiently, align themselves with the earth's magnetic field. As soon as the material cools again, the particles are frozen into position, like tiny, locked compass needles. They thus indicate the orientation of the earth's magnetic field at the time and place of heating, be it a thousand or a million years ago.

A number of remarkable findings came from analyses of remnant magnetism in urns and rocks from various islands and continents. For one thing, it was evident that the magnetic poles had "migrated" over time—had shifted position along routes that were traceable on a map. (Such movements are thought to be related to events deep inside the earth's fluid core and possibly to changes in the earth's spin axis.) Even more significant, the "frozen compass needles" within the more ancient rocks of Europe and North America pointed to different positions for and different migration routes of the North Pole. Only if one imagined the two continents joined together and then drifting apart would the migration routes of the North Magnetic Pole coincide.

Another remarkable discovery was that in the course of the past few million years, the earth's magnetic field has reversed itself at least sixteen times (North Pole became South Pole magnetically, and vice versa). The causes of these flip-flops remain uncertain—again, developments in the fluid core are thought to be responsible—but the timetable of reverses helped confirm the continental-drift argument in a way no one suspected when they were discovered.

In 1955 and 1956, a magnetic survey of the Pacific floor revealed a series of roughly parallel north-south "avenues" with magnetic fields which, from avenue to avenue, alternated between being abnormally intense and abnormally weak. After much debate, a young British scientist named Frederick J. Vine, who had been examining records of similar magnetic pathways in the Indian Ocean, finally guessed the reason for them.

Mindful of the sea-floor spreading theory and the new evidence of reversals in the earth's magnetism, Vine reasoned that if molten rock was continually rising into the mid-ocean ridges, hardening there and then being carried away to both sides of the ridge, it would form avenues of rock magnetized according to the orientation of the earth's magnetic field at the time each was laid down. When the field flipped over, new sea floor laid down along the ridge's centerline would leave an imprint that was the reverse of the one for the previous avenue. The reversed field, as recorded by a ship passing above it, would then appear to differ in intensity from the magnetism of avenues to either side.

Magnetic Message

Two years later, Vine and J. Tuzo Wilson of the University of Toronto put the firishing touches on the explanation. The rate of magnetic reversal was known to be irregular: sometimes the field had remained stable for hundreds of thousands of years, but in other eras it had flipped over every few thousand years. Vine and Wilson theorized that to conform to those long and short magnetic epochs there would have to be a pattern of wide as well as narrow avenues. The succession of avenues, like the dots and dashes of Morse code, would spell out a message on the ocean floor, on both sides of an active ridge—and the pattern on one side would be a mirror image of the pattern on the other.

The two men rush do look at the magnetic map of the Pacific floor off North America and there, to either side of the Juan de Fuca Ridge (believed, because cf its earthquake activity, to be manufacturing new sea floor), was the symmetric pattern they had envisioned. Even more striking was the symmetry to either side of the Reykjanes Ridge in the Atlantic.

A series of fossil finds in the Antarctic added crushing weight to the continental-drift hypothesis. On the first attempt to climb the Beardmore Glacier on his way to the South Pole, Sir Ernest Shackleton and his party had in 1908 discovered coal deposits with fossilplant remains similar to those of India and other parts of the hypothetical Gondawanaland.

During the final days of 1967, a New Zealand geologist had found a fragment of bone east of Beardmore Glacier which was tentatively identified as part of a labyrinthodont jaw. The labyrinthodonts were amphibians (named for the labyrinthine structure of their teeth) who marked a critical stage of evolution, for it was they who first crawled out of the water and began to colonize the land some 350 million years ago.

The possibility that labyrinthodonts had lived in Antarctica was so exciting that Edwin H. Colbert, one of the world's leading authorities on fossil amphibians and reptiles, went to the South Pole to do some fossil hunting in the mountains west of the Beardmore Glacier.

During the Antarctic summers of 1969-70, expeditions found a variety of Triassic reptile remains that seemed representative of a fauna virtually identical to one typical of the same period, 200 million years ago, in South Africa. At some point during the Triassic period, between 230 million and 180 million years ago, Antarctica had to have been connected to Africa.

Rethinking Evolution

To paleontologists, proof that the geography of the world had been in constant flux came as a bombshell. It was necessary to look at the history of life from an entirely new perspective. For example, one of the strange affinities that became comprehensible was the resemblance between the amphibians living in Texas during the coalforming period 300 million years ago and their contemporaries in Czechoslovakia. Alfred Sherwood Romer, the great Harvard paleontologist, pointed out that the Czechoslovakian inhabitants looked as much like those in Texas as did amphibians in New Mexico, only a few hundred miles away. The apparent anomaly could be explained by the notion that the Atlantic Ocean did not exist as a barrier between Europe and North America.

For millions of years before the Isthmus of Panama rose from the sea, South America was cut off from the northern continents, and the most extraordinary marsupial bestiary evolved there. There were marsupial counterparts of the weasel, wolf and cat, as well as the borhyena, comparable to a puma. One creature was the size of a bear, and another had tusks resembling those of a saber-toothed tiger.

As long as the marsupials were isolated from more efficient mammals, they were free to proliferate and evolve into many forms. But

changing geography betrayed them. When thrusting movements of the Pacific floor lifted Panama from the sea and volcanoes sprouted along the isthmus, the placental mammals of North America swarmed south. The hoofed animals were too swift for the marsupials, who were all eliminated, except for the lowly opossum.

Perhaps the theory's most dramatic contribution to the rethinking of evolution is in what it says about the role of continental marriages and divorces in the rise of man. During the relatively recent period of continental breakup, mammals became far more diverse than the previous rulers of the earth, the dinosaurs. The reason, it is suspected, was that the breakup provided numerous isolated environments in which diverse species could evolve without outside competition. Since the primates—and eventually man—evolved under such circumstances, one can only wonder whether we would be here were it not for the breakup of continents, which moved into high gear some 150 million years ago.

Process at Work

If it was hard to believe Alfred Wegener's original notion of drifting continents, it is even more difficult to comprehend some of the monumental processes we now know are at work within the earth's crust. For instance, it appears that a section of the Pacific floor comparable in area to the whole western Atlantic has descended beneath the United States as the continent was driven west. The magnetic patterns of the Pacific floor suggest that most of the criginal eastern half of that floor has vanished down a trench that once lay along the west coast.

Today the pattern of motion has changed along the coast, and the trench is gone. The descent of the Pacific plate beneath North America has produced a rather evenly spaced chain of volcanoes from Lassen Peak in northern California to Mount Rainier in Washington state. As with such volcanic systems throughout the world, they form a line parallel to the coast and about 100 miles inland.

But downward movement of the plate has subsided, the volcanoes are largely dormant, and, along the West Coast, it is the northwest drift of the Pacific plate relative to the North American plate that dominates. Sea-floor production along ridges, and sea-floor burial beneath continental rims seem to have been responsible for most, if not all, of the mineral deposits on which our civilization depends. Drilling into the deep-sea floor by the Glomar Challenger—the first ship capable of doing so—has shown that metal-rich sediments are laid down where new sea floor is being formed along midocean ridges.

The process is most dramatically evident in the hot brine pools

along the centerline of the Red Sea, but it also seems to work efficiently along the most important active ridge of the Pacific—the East Pacific Rise. Sea water apparently makes its way down a mile or more into hot rock, which is slowly rising into the ridge, leaching out various metallic constituents. When the water gets hot enough, it rises to the surface and erupts geyserlike through the sea-floor—depositing metallic sediment—or forces its way into cracks in the underlying rock to form veins of ore.

Origin of Ore and Oil

The rock and sediment then ride with the oceanic plate as it moves away from the ridge. When a plate descends beneath a continent, it may deposit its metallic cargo on land. For example, one plate is apparently descending beneath the Chilean coast at the rate of about six inches a year. At depths of sixty miles or more, some of the plate material melts and pushes its way up into the Andes. Exactly how this process accounts for ore deposits in the high mountains is not understood, but scientists suspect that copper mined there today originated along the East Pacific Rise millions of years ago.

Only recently have geologists begun to realize how plate motion created the conditions necessary for oil deposits. The process begins when two land masses come together and close off an oceanic basin. Repeated evaporation of the water will leave a salt layer on the ocean floor which, after another geographic change, may be covered over by a sediment rich in animal and plant remains. These ultimately break down into gas and oil droplets, which are covered by new layers of sediment. Then, here and there, columns of salt push up through the layers and warp them into traps which capture the upward-migrating droplets.

It appears that the world's changing geography has repeatedly provided the conditions for this sequence of events. In its infancy, the Atlantic was a chain of narrow seas like the Persian Gulf. The oil deposits created beneath its floor were later split and dragged apart, so that there are some off the coast of New England as well as newly discovered sources off Norway.

Future of Earth

Such rereadings of the earth's history have become commonplace. A mood of exhilaration has swept geology, which was long regarded as one of the most staid of sciences. Yet, great questions remain, the most basic one being the process that is moving the plates. It is presumed to be some form of convection—the churning of hot, plastic material beneath the rigid-surface plates—but the exact nature of the process remains in doubt. One school believes that in certain key

areas, as beneath Iceland, great "plumes" of semimolten material rise from depths almost as remote as the core, spreading beneath the rigid surface plates to force them apart. Others say that the rising, spreading and sinking movements are confined to the top few hundred miles beneath the plates.

That forces of inconceivable strength have been at work in reshaping the earth's surface is clear to anyone who views the grossly deformed layers of rock in a new highway cut. Today, these forces are far better understood than they were a couple of decades ago. But one of the beauties of science is its freedom from finality. No answer is ever the final one. In his vehement response to the euphoria that greeted the new plate theory, Vladimir V. Beloussov, dean of Soviet earth scientists, said:

We have dedicated our lives to a difficult science, which, unfortunately, is still assembling fundamental data. We have only just begun to penetrate the secrets of the very shallow interior. It would be most irresponsible of us to tempt young people, saying all the difficulties are behind us.

Most earth scientists would probably agree that Beloussov is a bit overcautious. But they would share his view that, in our search for an understanding of the planet on which we live, the end is not in sight. In particular, the distant future remains beyond our present powers to predict. Will the Pacific Ocean ultimately disappear as the North American plate moves westward? Will the Atlantic eventually be as large as the Pacific is today? Will the Americas collide with Asia? Indeed, is it such collisions that force a change in the patterns of motion? If the Americas eventually join Eurasia, will the continents be torn apart elsewhere?

Answers to such questions are difficult, because we know little about the more distant past before the breakup of Pangaea that gave birth to the Atlantic. We are not sure whether the present era of drift is a "new" phase, geologically speaking, or whether the continents have been restlessly adrift throughout their history of more than 4,000 million years. With a better knowledge of the past, we can get an idea of where we are headed in the long run.

LIBERTY, PROPERTY, AND THE STATE

By Marshall Cohen

The book under review has been hailed, even by those who regret its conclusions, as one of the most impressive applications of philosophical intelligence to a controversial issue of great public importance — in this case, the relationship of state power to justice. The reviewer is professor of philosophy at the City University of New York and editor of the journal, Philosophy and Public Affairs.

Anarchy, State and Utopia. By Robert Nozick. New York: Basic Books. 367 pp.

In my opinion, no contemporary philosopher possesses a more imaginative mind, broader interests, or greater dialectical abilities than Robert Nozick.

All these qualities are displayed in Anarchy, State and Utopia, in which Nozick manages to discuss everything from the nature of scientific explanation and the meaning of envy to the case for vegetarianism and for private property. Even those, whether philosophical anarchists or pragmatic liberals, who reject his conclusions about the state and the nature of justice will find the deepest kind of instruction in testing their views against his arguments.

In calling Nozick a libertarian, I associate him with such writers as

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the economists Friedrich von Hayek, Milton Friedman, and Lord Robbins. Nozick is — from a philosophical and moral point of view, at least — a more sophisticated writer than any of them. But he shares with them a fear of the state, a commitment to liberty, a respect for private property, and a belief in the efficiency and justice of a market economy that is often described as "libertarian."

The Limits of State Power

Nozick assumes from the start that men are endowed with certain rights, which are very much the ones John Locke supposed them to possess in the state of nature. No one ought to harm another "in his life, health, liberty or possessions," Locke declared, and in the state of nature men have a right to "order their actions and dispose of their possessions as they [see] fit." Locke recognized, however, that in the anarchistic state of nature people will inevitably "transgress these bonds, invading other's rights and ... doing hurt to one another." For this reason, he believed that a civil government, or what we call a state, was needed to protect those rights and mitigate those hurts.

Nozick agrees with Locke, but he has also observed the breathtaking wickedness of which the state is

capable. Consequently, he has considerable sympathy for the anarchists' contention that in exercising its monopoly of force the state necessarily violates the very rights Locke expected it to protect. It does so not only when it punishes those who challenge its monopoly of force but also when it requires some men to pay for the protection of others.

Redistribution vs. Compensation

Despite his sympathy for the anarchist view, Nozick, in the end, rejects it. He maintains that in the state of nature itself a state or a statelike "protective" agency would inevitably arise. Furthermore, it could arise by a process that need not violate anyone's rights. This state would limit itself to protecting men against force, theft, fraud, and the breaking of contracts. Nozick argues, however, that any more extensive state — in particular, the sort of state that mainstream liberals and socialists support — necessarily violates our natural rights and cannot be justified. Following John Stuart Mill, he contends that the state is not justified in coercing people to act for what it takes to be their own good. It cannot, for example, forbid them to use drugs on these grounds. In addition, and even more controversially, Nozick believes that the state should not force some of its citizens to come to the aid of others either by enacting good-samaritan laws or, more indirectly, by taxing them for the relief and welfare of others. In short, the state should not engage in paternalistic or in redistributive activities. Any state that does so inevitably violates the rights

of some of its citizens.

But since a state of this sort provides protection for everyone and enforces the rights of all, isn't it actually engaging in the kind of redistributive activities it ought to eschew? When the state requires the rich and powerful to pay for the protection of the poor and the weak, isn't it violating the rights of the rich and the powerful? Nozick must dispose of this difficulty; otherwise, he will have to agree with the anarchists that even a minimal state is not minimal enough. He would also open the way for welfare statists to argue that in using the state to redistribute goods they are simply relying on a principle that he himself accepts. To avoid this dilemma Nozick maintains that in providing protection and enforcing rights, the minimal state is not engaged in redistribution but in something quite different. It is simply providing just compensation to those it deprives of a fundamental right they enjoy in the state of nature, the right to protect themselves directly or through their chosen agents.

If we accept Nozick's argument, we must then conclude that the minimal state does not engage in redistributive activities and provides no precedent for the more extensive state to do so. Nor can there be any other argument in favor of a more extensive state. In particular Nozick rejects the widespread view that, since justice requires a redistribution of goods, justice requires a more-than-minimal state to carry out the redistribution. Far from it: any such redistribution plainly violates the

rights of those who are required—or forced — to come to the aid of others. For the state to treat men as resources for one another compromises the neutrality proper to government, and, by giving men property rights in one another, turns them into something like slaves. This view is neither original, nor, in my opinion, acceptable. In the course of defending it, however, Nozick offers a superb elaboration of his own "entitlement" theory of justice and presents a searching critique of what he calls pattern theories of justice, especially the widely admired theory of his Harvard colleague John Rawls.

Theories of Justice

Most of the familiar theories of justice, according to Nozick, require the distribution of goods according to a single "natural" dimension, or pattern. Thus, theories of justice require us to distribute the goods of society to each according to his needs, or his efforts, or his moral merit, or his marginal productivity. But Nozick's entitlement theory suggests that none of these pattern theories can be true. For, as Nozick sees it, people can justly come into possession of things in ways that will inevitably upset any of the suggested patterns. If, as Locke says, men have the right "to dispose of their possessions ... as they [see] fit," then in any number of ways by testamentary disposition, by acts of charity, or simply by spending their money as they will - men can upset these allegedly just patterns. If we seek to maintain or enforce any such pattern, we necessarily

interfere in their lives and do so in ways that violate their most fundamental rights.

An example may be useful. Nozick asks us to imagine that our favorite principle of distribution is, in fact, realized. Perhaps it will require that economic goods are equally divided (or that everyone is rewarded in proportion to his contribution to society). Suppose, now, that in such a society a large number of people wish to spend their money seeing Wilt Chamberlain play basketball. As a result, Wilt Chamberlain will have more money than most. But, Nozick asks, if the original equal distribution is just, and we are entitled to exchange part of our fair share for basketball tickets, how can the resulting distribution (with Wilt Chamberlain now enjoying a very large share) be unjust? Will the equalitarian society we have imagined forbid capitalist acts between consenting adults?

At this point one may be tempted to say that of course the strict equalitarianism we have imagined is far too strict. In showing how any attempt to enforce it would violate our Lockean rights, Nozick has not refuted all pattern theories, only this rather simpleminded one. If, instead, we espoused the more flexible principle of distribution according to one's contribution to society, then Wilt Chamberlain's larger share might well be justified. Is it not possible that a pattern theory like this is true? Again, Nozick would make objections that are, at least at first blush, devastating. Suppose that Wilt Chamberlain wishes to distribute his earnings to his favor-

ite charity, or to those he loves. Is it not possible - indeed, is it not likely - that his beneficiaries will then enjoy economic goods and benefits in excess of their contributions to society? If we wish to maintain the suggested pattern, we will have to deny Wilt Chamberlain his natural rights. We will have to interfere with men's lives continuously and, in Nozick's view, indefensibly. The redistribution of Wilt Chamberlain's earnings to enforce an allegedly just pattern will put his efforts "on a par with" forced labor. In general, permitting such redistributions will make others our "part owners." Far from thinking that justice requires a more-than-minimal state, Nozick believes that liberty forbids it.

When Is Acquisition Legitimate?

This is an arresting and brilliantly argued view. But it seems to rely too heavily on certain of our moral intuitions and judgments at the expense of others. According to Nozick, any distribution of goods that results from a legitimate transfer of legitimate acquisitions is itself legitimate and just. When, however, is an acquisition legitimate or just? In one of his best passages Nozick criticizes Locke's theory that we come into legitimate possession of things by mixing our labor with them. He does not, in this work, offer an alternative theory, but notes that Locke attached an important proviso to his theory of acquisition: no property right arises if allowing it would make others worse off. Thus a person may not appropriate the only water hole in a desert and charge everyone what he wishes for its

use — this would worsen the position of others.

Locke's proviso, which Nozick endorses, would seem to rule out many other private appropriations besides water holes. But Nozick is so firm a believer in the productivity of the system of private property that he thinks this will rarely be the case. He thinks, indeed, that it will be the case only in catastrophic circumstances. There are, however, many reasons to doubt Nozick's view that a system of permanent bequeathable property rights does have the productive advantages he claims for it. This is a question of economic fact and cannot be argued here. But if Nozick is wrong about the economic facts, then the amounts and kinds of property immune to private acquisition will be greatly increased. It will be possible to argue that such property ought to be acquired on a more limited basis (perhaps not permanently) or acquired collectively by public authorities.

The Public Interest

Still more to the point is the question of whether we should accept Nozick's standard of justice in the first place. I want to ask, instead, why we should allow private acquisitions to take place on the mere showing that no one will be worse off. Isn't a higher standard appropriate? Doesn't justice require that the private acquisition of at least certain sorts of things be allowed only when it is reasonable to believe that such an arrangement will make the greatest possible contribution to the public good?

Of course, it is possible to dispute

particular cases. But I would argue that we are probably right in having prevented the private acquisition of the limited number of television channels, and decided instead to have a government agency distribute them by a licensing procedure. that refers explicitly to a higher standard — the public interest. Such a standard will, no doubt, often permit private ownership. Perhaps this is the case with atomic energy or off-shore oil fields. But the argument will have to be made, and it will have to meet a higher standard than the Lockean proviso requires. Our experience with original acquisitions, a rare thing in these late days of the world, suggests that we do not require enough when we require only that they not make others worse off. It is apparent, too, that many acquisitions made irretrievably long ago were themselves unjust.

A more-than-minimal state is required, then, to ensure that acquisitions are just. I would argue, too, that we need such a state to ensure that transfers are just. For, many transfers that Nozick allows put immense resources and special opportunities into the hands of people who do not deserve them (and who may not use them in the most productive way possible). In addition, the privileged position enjoyed by such people makes it impossible to give others a fair chance in life, including the chance to make a significant contribution to the common life. These unfairnesses ought, in my opinion, to figure in a theory of justice, and they often make it necessary to limit the range, and even to override the claims, of the specific Lockean rights that Nozick assumes without argument and supports without reservation. Making such corrections is, I believe, a necessary and proper function of the state.

Political Rights

Of still greater consequence is the need for the state itself to rest on just foundations. This is a problem that Nozick tends to neglect because, in the minimal state, political offices and political institutions will be far less consequential than they are in present circumstances. But I doubt whether they will be utterly inconsequential, and, in any case, I doubt that a minimal state will be sufficient to enforce our moral and political rights. It is important to recognize that great accumulations of wealth may undermine the value of equal political rights and introduce unjust distortions into the working of fundamental political institutions. It is not unjust to restrict their use or even to abolish them. This is so even if it frustrates the "loving behavior" of a Wilt Chamberlain, or the philanthropies of a John D. Rockefeller.

In my view, then, a case for a morethan-minimal state can be made even aside from the question of whether the state ought to take as an objective the redistribution of property in order to achieve economic justice. Restrictions on the ability to do as one sees fit with one's possessions may be required in order to guarantee the still more fundamental claims of political justice.

A NEW VIEW OF SLAVERY

By David Brion Davis

David Brion Davis is professor of history at Yale University. He received a Pulitzer Prize in 1967 for The Problem of Slavery in Western Culture; a sequel volume, The Problem of Slavery in the Age of Revolution, was published in 1975.

Roll, Jordan, Roll: The World the Slaves Made. By Eugene D. Genovese. New York: Pantheon Books. 823 pp.

The question of Negro slaveryits origins, evils, economic value and ultimate consequences-has now evoked nearly two decades of searching reexamination. Since the 1950s no other question in American history has occasioned more lively controversy or sweeping reinterpretation. The debate has tested new methods of discovering and weighing evidence; folklore, anthropology, econometrics and constitutional law; and, by reaching out for comparative soundings in other cultural and historical experiences, the debate has broadened the very meaning of historical understanding.

The professional historians' preoccupation with slavery cannot be dismissed as a faddish offshoot of the civil rights struggles of the 1960s. Those struggles simply dramatized a point on which many black historians—and a few white historians had long insisted: that the conflicts generated by slavery produced the only major class struggle and ideo-

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logical rift in American history. The Civil War (1861-1865) stands out as the Grand Canyon of our historical landscape not because it was the needless conflict of a "blundering generation," but because its origins and consequences laid bare the terrifying substructure of American life, revealing the price that we and our forefathers have paid for our world-envied success. The awesome scar has usually been romanticized as a noble wound. But it has also provided an undeletable record of the basic forces that built our social order.

A Marxist View

Eugene D. Genovese was one of the first modern scholars to view American slavery in the perspective of world history. As a Western Marxist, Genovese pictured the emergence of the Southern slavocracy as a reactionary, "seigneurial" challenge to nineteenthcentury capitalism. Although Genovese saw the slave systems of the New World as the unsavory offspring of Europe's lust for world markets and commercial profits, he also insisted that the relationship between master and slave was fundamentally different from that between employer and wage earnerso different, in fact, that slavery always tended to create a culture and way of life antithetical to capitalism. Yet these seigneurial tendencies came to full fruition only in

the American South, which was the only slave society to acquire ideological independence as well as economic and military self-sufficiency.

Roll, Jordan, Roll is Genovese's long-awaited magnum opus. It is also the most profound, learned and detailed analysis of Negro slavery to appear since World War II.

Roll, Jordan, Roll covers so much ground and presents such rich mixtures of information and argument that its theme cannot be summarized without some distortion. Genovese begins by describing American Negro slavery as a system of class rule and class exploitation distinguished by its racial form and by the complex and ambivalent relationships between slaves, masters and non-slaveholding whites. For the slaves—as for the victims of most forms of oppression—the serious threats did not arise from the system's physical cruelty and material deprivations. Paradoxically, the worst dangers lay in the paternalistic ideology that shaped good will and conscience to the masters' selfinterest.

The Role of Paternalism

The masters, even while affirming their own absolute authority, strove to convince the slaves of the moral legitimacy of the system. They shamelessly contended that all blacks were the mere instruments of their owners' wills. Yet by playing the role of personal provider and protector, the slaveholder tried to prove his rights to his slaves' gratitude. American slaves, more than those in any other New World soci-

ety, faced the peril of total dependency and loss of self-respect.

The explanation, Genovese insists, is not to be found in the physical severity of the regime or in the lack of institutional restraints on the slave-owner's self-interest. Rather, the South emerged as the only New World society to develop a truly paternalistic culture and world view. And since the South was also the only New World society in which the black population rapidly increased through reproduction, its lack of dependence on imported labor from Africa deprived the slaves of continuing contact with their own cultural heritage.

But as Genovese proceeds to show, in his remarkably sensitive reading of slave narratives, the slaves were never the passive, receptive instruments their masters wanted them to be. The slaves interpreted paternalism on their own terms and succeeded in redefining the limits of their masters' power. In countless ways, paternalistic gestures evoked expectations and responses precisely the reverse of those intended by the masters: "By developing a sense of moral worth and by asserting rights, the slaves transformed their acquiescence in paternalism into a rejection of slavery itself."

Genovese's great gift is his ability to penetrate the minds of both slaves and masters, revealing not only how they viewed themselves and each other, but also how their contradictory perceptions interacted. If the system cultivated self-deceptions on both sides, the illusions of the masters were particularly dangerous.

Convinced of the righteousness of their power, the slaveholders were tragically vulnerable to the traumatic discovery, at the time of the Civil War, that their slaves were not the grateful, submissive creatures they had imagined them to be, and that therefore the master class was not what it had imagined itself to be.

The Power of the Human Spirit

For Genovese, the "story" of slave life is a testament of the power and perseverance of the human spirit under conditions of extr∈me oppression. Largely as a result of their profound religious faith and affirmation of life, the slaves won their struggle to preserve some degree of individual dignity and of collective consciousness as a "black nation," but at the cost of concessions that ill prepared them for the future. Ultimately, the conflicts engendered by is slavery could only be resolved by a destruction of the delicate checks and balances of the paternalist regime, including the checks that had restrained the racism of lower-class whites by channeling it in support of slavery. The collapse of paternalism thus prepared the way for a century of racial segregation and discrimination.

Roll, Jordan, Roll covers an incredible range of topics and offers fresh insights on nearly every page. Genovese takes slave wedcings and funerals as seriously as he takes the discrepancies in Southern slave law. He seems as much at home in slave kitchens as he is when discussing Afro-American language, clothing, and rhythms of time and labor. He

is at his very best when he seeks to rehabilitate two of the most maligned and stereotyped figures in American history: the black Mammy and the black slave driver. This brilliant tour de force rests on an appreciation that the supreme test of paternalism hinged on those slaves who were accorded some measure of authority and leadership, and who, by mediating between black and white worlds, exposed the underlying absurdities of slavery.

The drivers, or foremen, proved that black slaves could manage production, rule their people and even make or break white overseers. The Mammy, as a diplomat, confidante and surrogate mistress of the plantation, dramatized the weaknesses and dependency of the whites. Yet Genovese convincingly argues that both the Mammy and driver occupied untenable positions, since they paid for their dignity and leadership by reinforcing the paternalist order.

The Pitfalls of Theory

Unfortunately, Roll, Jordan, Roll also suffers from serious flaws. The meaning of paternalism is devastatingly clear when Genovese discusses specific situations of dependency, accommodation and resistance. The concept becomes hazy when extended as a general historical category. Genovese seems to have retreated from the term "seigneurial" much as he earlier retreated from "feudal." Yet he still equates paternalism with a "precapitalist" stage. It is sufficient here to say that he has not moved far in clarifying the relationship between paternalism and capitalism. No doubt Southern paternalism was antithetical to capitalism in important respects. But Genovese's perceptive account of legal and social reforms within the slave system is only obscured by his insistence on their "precapitalist" characteristics. Similar reforms have strengthened ruling-class hegemony, as he would be quick to acknowledge, in both capitalist and socialist societies.

Genovese is masterful when he turns to social psychology, particularly when he demonstrates the concrete relationships between seeming opposites, such as cruelty and humaneness, kindness and hate, or accommodation and resistance. He is at his weakest when he theorizes on the grand designs of history.

Christian Faith and Survival

Genovese's weaknesses cannot be dismissed as minor lapses, since they concern the development, integration and final resolution of his major themes. Paradoxically, it is not the loose Marxist framework that unifies Roll, Jordan, Roll, but rather a conceptual source seldom associated with conventional Marxist theory-Christianity. The book's title comes from a slave spiritual song; the text and chapter headings are studded with Biblical quotations. Genovese's key argument, clearly addressed with glee to agnostic liberals, is that religion provided slaves with stamina and selfrespect, developing into "the organizing center of their resistance within accommodation." Genovese perceives the slaves' religion as a complex blend of African and Christian norms, not as an ideology handed from above. And precisely because religion served as the touchstone for both the masters' paternalism and the slaves' independence of soul, it became the major battleground for psychological control.

Genovese acknowledges that this wellspring of spiritual strength was better suited for survival against an oppressive regime than for effective political action after emancipation.

For Genovese, it was not the Protestant work ethic but Christianity which sustained the slaves: "Christianity offered to the oppressed and the despised the image of God crucified by power, greed, and malice and yet in the end resurrected, triumphant, and redeeming the faithful. However much Christianity taught submission to slavery, it also carried a message of foreboding to the master class and of resistance to the enslaved." Genovese deliberately ignores the moral tendencies within Anglo-American Protestantism that developed into militant abolitionism, within the very "superstructure" of bourgeois capitalism, and which thereby, for the first time in human history, made slavery a serious problem. Nevertheless, his contribution to Marxist and radical history may well lie in his penetrating appreciation that a religious "superstructure," while intimately related to the material conditions of life, is what gives life meaning and direction. He shows that it was precisely such meaning and direction that saved American slaves from the ultimate dehumanization.

THE IMPACT OF MODERNIZATION

By Guy E. Swanson

The reviewer is professor of sociology at the University of California at Berkeley. His books include Social Change and Birth of the Gods: The Origin of Primitive Beliefs.

Becoming Modern: Individual Change in Six Developing Countries. By Alex Inkeles and David H. Smith. Harvard University Press. 438 pp.

This is the kind of substantial research on a large subject that one always hopes to find out seldom does. If its implications are debatable—and they are—the debate will now be better informed.

Social and economic development has many consequences, among them being its effects on the way people think and feel about themselves and its effects on the standards by which people organize their lives. And on these subjects there are two schools of thought. According to the first, urbanization and industrialization are destructive of people as persons. They expose workers to a Hobbesian nightmare: to competition and exploitation. They assault them in body and in spirit, destroying their joy and their creativity, their humane tolerance for one another and their capacity for solidarity. They lower intellectual horizons and undermine feelings of personal worth. In the usual formulation, these consequences are

Copyright @ 1975 by the American Association for the Advancement of Science. thought more likely to occur if modern ways are introduced rapidly and under conditions of free-market capitalism.

Inkeles and Smith favor the second school of thought, and their expectations are quite different from the ones just described. From their reading of earlier research they conclude that the typical effects of economic development are an increase in personal freedom, confidence, and competence and a widening of horizons. In the research reported in this volume they have tried to measure each of a series of effects they expect. They conclude, empirical and theoretical grounds, that the effects constitute a single dimension, Overall Modernity. Their findings are based on studies of approximately 1,000 workers in each of six developing countries: Argentina, Chile, India, Israel, Nigeria, and East Pakistan (now Bangladesh).

Effects on Individuals

It is worthwhile to itemize the expectations with which this research was begun. Inkeles and Smith think that more modern social conditions lead to more of the following characteristics in individuals:

- being open to new experience and to new ways of doing things;
- being ready for change (acceptance of changed opportunities, greater willingness to allow others to do things in new ways);

- being disposed to form and hold opinions on a large number of issues that arise within and outside one's immediate environment;
- being aware of the diversity of attitudes and opinions around one, and valuing these variations in opinion;
- being informed about the wider world (knowing, for example, where Moscow and Washington are and that they are national capitals);
- being oriented to the present or the future rather than the past;
- believing that people can learn to exert considerable control over the environment, that they can better arrange human affairs, and that they can participate personally in this redesign of conditions affecting their own lives; feeling able to plan, valuing plans, and actually engaging in planning;
- seeing the physical and social worlds as calculable and dependable (believing, for instance, that the world is lawful, being willing to trust strangers);
- valuing technical skill and favoring a distribution of rewards to individuals according to the contributions they make through the exercise of skills;
- aspiring to educational and occupational advance for oneself and one's children (and valuing discoveries about the natural order as a source of solutions to human problems);
- •being aware of, and respecting, the dignity of others (as, for example, in restraint in dealing with subordinates);
- understanding the logic of decisions at the basic level of production.

Indepth Interviews

One of the authors' achievements is the development of an interview in which all these points, and many others, are touched upon. This interview required six months of pretesting. Questions were worded so as to be understandable to persons of little or no education in six widely different cultures. The meaning of the questions was standardized across six languages. Safeguards were devised to prevent the results from being affected by the tendency of some respondents, especially of persons with little education, to "agree" with statements of opinion to which the interviewer wants a reaction. Systematic checks were made to ensure that respondents understood the meaning of the questions and that the interviewers did not substitute their own answers for those of the respondents. Because the interview was long (taking from three to four hours to conduct), the whole form was edited so as to provide an interesting and coherent experience for interviewees. Local people were recruited and trained to do all the interviewing and most of the supervising of the work in each country. It is a measure of the success of these efforts that almost all the people who fell within the authors' samples agreed to an interview, stayed with it to the end, and seemed to enjoy it.

There are many special samples in this study, but four provide the basic data. In each country, factories were selected from official lists. These factories were to come from at least three cities, one main industrial center and two lesser places. Half

the factories were "traditional" and half "modern." (The modern factories were those that treated their workers as citizens possessed of rights and had a management highly interested in the efficiency of organization and production.) Two samples of workers were then chosen from each of these factories: a sample of men aged eighteen to thirty-two who had worked in a factory for three or more years, and a sample of men, comparable with the first in age, education, ethnicity, and religion, who had had less than three months of factory experience. The third basic sample was matched as far as possible with th∈ first, and consisted of men working in agriculture who had had no incustrial experience and who lived in the districts from which the industrial workers originated. The fourth basic sample, likewise designed to match the first, consisted of long-time urban workers who lacked both industrial experience and experience in other complex organizations. (It consisted largely of domestic servants, craftsmen, vendors, drivers, waiters, and clerks in small shops.)

The primary question is whether the men who have had the most experience in modern institutions will have the highest scores on an Overall Modernity (OM) scale. The answer seems to be that they have — and dramatically so.

Significant Findings

Three aspects of a modern experience were found to relate significantly and independently to high scores on OM: years of school completed, years of factory experience,

and exposure to the mass media (listening to the radio, reading a newspaper). These relationships hold up when controls for several other variables are employed: controls for father's education, years of urban experience, the modernity of the factory in which the worker is employed, the cosmopolitanism of the city in which he lives, the area of the city in which he resides, his birth in the city as against the country, and the rural or urban location of the school in which he was educated.

Certain other findings are of special interest. Farmers who participate in an agricultural cooperative have scores on OM that are comparable to those of factory workers. (The data on this come only from Israel and East Pakistan.) A man's education and his score on OM are positively associated with the education of his father, but the correlation between his father's education and his OM dwindles almost to insignificance when the man's own education is controlled. Years of education in a rural school have as strong a correlation with scores on OM as do years of education in an urban school.

It might be thought that modern experiences such as exposure to the mass media, work in a factory, or years of schooling would affect a man's orientations but not his actual behavior. Separate analyses show that both are affected. Not just a man's attitudes but his knowledge of current events, his effective literacy, and his cognitive complexity are all related to his having had more modern experiences.

Are respondents who have mod-

ern experiences, or who have high scores on OM, more likely to be under greater personal stress? A standard questionnaire on psychosomatic symptoms shows no differences among respondents by their degree of modernization.

All these relationships are found in all or almost all the countries studied, cutting across wide differences in culture and historical setting. But how are the findings to be explained?

What is it about factories, schools, or exposure to the mass media that makes the difference? And, since these differences entail comparisons with rural workers, what, specifically, are the experiences of rural workers in these countries?

In most of these countries (Israel is the principal exception), most of the workers in agriculture are very poor, and they do not farm on land that they or their families or communities control. They are a kind of rural proletariat, gaining a bare livelihood as migrant laborers, as tenants or sharecroppers, or as laborers on large estates located near their villages. They are likely to be people for whom stable and traditional rounds of life have been shaken, whose communities have lost authority, and whose sense of personal dignity and self-esteem is undermined. Perhaps it is by comparison with populations of this sort that Inkeles and Smith find more modern workers to have higher self-esteem, greater openness to change, faith in planning, and so on. Perhaps comparisons with rural communities having greater integrity and autonomy, or with independent farmers who make at least a passable living from their work, would show a different picture. Perhaps these possibilities can be explored through further analyses of data from the present study.

Unanswered Questions

Comparable questions need to be asked about experiences in schools and factories. Is it, as seems plausible, and as the authors suggest, planful, routinized activities, "relative autonomy in arranging one's own work," and similar aspects of industrial employment that modernize men? Or is it simply the fact of working in large-scale bureaucratic organizations? Or is it unionization? Or is it the situation in these countries? We know, for example, that the political parties in these developing countries are sharply divided along lines of social class — much more so than in most of the older industrialized states. Is it the greater ease of working class parties in reaching and mobilizing industrial workers that makes the latter more aware of larger issues, of the possibility of change, and of their own ability to do something about the conditions under which they live?

Could some of the findings be the result of the migration of more modern men to the city, or of their greater tendency to seek, obtain, and retain industrial employment? Or perhaps it is not men who are more modern in all respects who arrive at the factory but men who are "more ambitious, more adventurous, and more eager to test themselves in a larger arena than that provided by the typical village

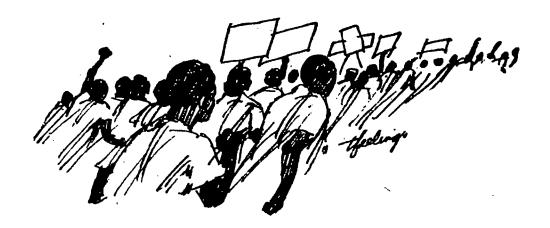
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square?" Were something like this the case, the authors' results might be due to the interaction of these dispositions with factory experience rather than to industrial employment alone.

Nor do the data on men who live and work in a city but who are not employed in factories address these problems. These urban nonindustrial workers have lower scores on OM than the factory workers; however, this may be due not to their lack of factory experience but to their greater ties to kinsmen and friends in the village. Perhaps these contacts insulate them from the modernizing influences that are present in their situation. At least that possibility needs to be considered. In developing societies around the world, tradesmen, craftsmen, and artisans in the towns frequently depend for their livelihood upon trade with "country cousins."

There is, finally, the problem of

the importance that the modernizing of their outlooks, knowledge, and skills has for the individuals themselves and for their society. On this I share the authors' feeling that the involvement of these men in more modern experiences has, on balance, been personally enhancing and not disorganizing (always remembering that the comparison may be with agricultural laborers and tenant farmers who live in dire poverty). I also share their judgment that modern organizations and societies require citizens with a modern outlook and modern skills. The evidence in this study of steady growth in such matters with each year of schooling or of industrial experience, and with exposure to the mass media, suggest how such citizens can be produced. But I also agree with the authors' conclusion that we are still far from knowing precisely what is going on and how it occurs. They have, however, greatly narrowed the places in which it seems important to look.



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CELEBRATING THE AMERICAN PAST

By Burke Wilkinson

Novelist and biographer, Burke Wilkinson's most recent publications are Francis in All His Glory and Cry Sabotage! The review is from the Christian Science Monitor.

Centennial. By James A. Michener. New York: Random House. 909 pp.

With a score or so books behind him, James Michener now tackles a theme that would defy many a lesser man. To celebrate the bicentennial of America and the hundredth anniversary of his favorite state of Colorado, he spins for us the story of that state's first 136 million years.

As microcosm, he takes the imaginary town of Centennial on the south fork of the Platte River. But this in no way diminishes the ambition of his undertaking nor the sweep and scope of the unfolding story.

As every reader of Hawaii and his other novels knows, Michener is particularly good on pre-history. He has a great feeling for mountains thrusting through the crust of earth, of great rivers forming on their flanks—rivers that carry the sand and silt and rock that form the plains below.

Colorado's actual history begins, in his telling, with the Diplodocus, a creature of lagoons and marshes, "not the largest of the dinosaurs and certainly not the most fearsome." Eleven pages and quite a few million

1974 The Christian Science Publishing Society. All rights reserved. years later, long after the rather engaging Diplodocus has vanished, an animal comes along that will in time give man "his greatest assistance, pleasure and mobility"—the horse.

Enter, Mankind

Then after some fifty pages about bison and beaver, eagle and snake, pronged antelope, wolverine and sleek deer — all living in some "subtle and long-approved harmony"—a new, two-legged creature makes his appearance, and our tale is launched in human terms at last.

Michener creates some seventy characters to keep his story moving along. The first major creation is Lame Beaver, the Arapaho chieftain who scores many a "coup" against Apache, Comanche and Pawnee (a coup is like a battle star on a campaign ribbon, and involves actual physical contact with the enemy in combat). The time is now the latter half of the eighteenth century.

The Saga Begins

Then we meet the most vivid character in the book, known simply as Pasquinel. Out of some kind of glorious cussedness all his own he paddles 500 miles up the Platte through Pawnee and Cheyenne country in search of beaver pelts.

Almost simultaneously Pasquinel marries twice — a German girl in St. Louis and a squaw called Clay Basket, daughter of Lame Beaver. They

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both love him all his brawling life.

So the Michener five-generation saga is born. Pasquinel's daughter by the German girl marries the good, decent Major Mercy, who spends his life apologizing to the Indians for taking their lands and their lives. His two half-breed sons terrorize the frontier, more Indian than the Indians.

Loneliness of the West

One of the best-realized sequences in the smooth-rolling narrative tells of the trek west of a good Pennsylvania German called Levi Zendt and the foundling girl he runs away with to find a new life beyond the plains. Partway along, Levi, sadly, reluctantly, has to sell his fine team of horses for oxen, more suited to haul his big Conestoga wagon.

Here, with a touch of the poet, Michener describes the couple's reaction to the sale:

In that moment the Zendts knew what moving west meant—the awful loneliness, the burden of rifles, the strange rivers flowing swift with mud, the unknown Indians lurking, the long, long trails with no homes and no lights at dusk.

As a second wife, after his Elly is killed by a rattlesnake, Zendt takes Lucinda, Pasquinel's daughter by Clay Basket. So you see with what genealogical neatness it all ties in, right down to good, sound Paul Garrett, great-grandson of just about everybody in the book — model

Hereford man, first citizen of Centennial, and a person deeply concerned with Colorado's smogchoked, water-scarce future today.

The Platte River itself runs through the story like a silver thread. Sometimes it is tempestuous and unbridled, sometimes lazy and shallow and near-useless. But always it is there, like the superb Rocky Mountain peaks that are the miragelike backdrop to the vast plain.

Understanding the Land

For all the vastness of his canvas, Michener's characters remain for the most part two-dimensional. At times, Michener is muralist rather than novelist. When he is homespun-heroic, in artist Thomas Hart Benton's sinewy way, he is at his best.

At worst, his parade of people in period costume remind one of the kind of state or country court house paintings that cover wall space and history without much margin.

The remarkable thing is that it all works, that Michener pulls off his formidable task. Few can read these 900 pages without an expansion of understanding of the American land. Some shame for our treatment of Indian and Mexican is of course induced too.

But mostly there is pride, coupled with a sense of wonder at the absorbing way that Michener has encompassed so much of America's heritage for us.



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- "Does Literature Have a Future?" by Norman Podhoretz
- "Homage to Duke Ellington" by Ralph Ellison
- "A Race Against Time" by Robert S. McNamara
- "The Poet, the Self and Nature" by Joyce Carol Oates
- "What Is a Painting?" by Michael Polanyi
- "Improving the Environment" by Barbara Ward and René Dubos
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